

**EPA Superfund  
Record of Decision:**

**SIGMON'S SEPTIC TANK SERVICE  
EPA ID: NCD062555792  
OU 01  
IREDELL, NC  
09/19/2006**



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**RECORD OF DECISION  
SUMMARY OF REMEDIAL ALTERNATIVE SELECTION**

**SIGMON'S SEPTIC TANK SITE  
STATESVILLE, IREDELL COUNTY, NORTH CAROLINA**

**PREPARED BY:  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA, GEORGIA**

**September 2006**



**10457611**

# **THE DECLARATION FOR THE RECORD OF DECISION OPERABLE UNIT 1**

## **SITE NAME AND LOCATION**

Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina  
EPA Site Identification Number is NCD062555792 (Operable Unit 1)

## **STATEMENT OF BASIS AND PURPOSE**

This decision document presents the selected remedy for the Operable Unit (OU) 1 for the Sigmon's Septic Tank Site which was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and, to the extent practicable, the National Contingency Plan (NCP). This decision is based on the Administrative Record for the Site.

The State of North Carolina concurs with the selected remedy.

## **ASSESSMENT OF THE SITE**

The response action selected in this Record of Decision (ROD) is necessary to protect the public health or welfare and the environment from actual or threatened releases of hazardous substances to the environment. Such release or threat of release may present imminent and substantial endangerment to public health, welfare, or the environment.

## **DESCRIPTION OF THE SELECTED REMEDY**

This OU action is the first for the site. It specifically outlines an action to address contaminated soils (including the stockpiles), sediments, and surface water. Further investigation is needed to characterize the extent of groundwater contamination before a groundwater ROD can be issued. The principle threat wastes at the site for OU1 consist of contaminated soils above Remediation Goals (RGs) that fail the Toxicity Characteristic Leaching Procedure (TCLP). This principle threat waste will be excavated and treated pursuant to Resource Conservation Recovery Act (RCRA) treatment standards (40 CFR 268) through solidification/stabilization prior to offsite land disposal.

The cleanup strategies will address threats, removal of principal threats through source control, treatment, and offsite disposal. A portion of the contaminated soil will be excavated and disposed in an offsite landfill without treatment.

The major components of the selected remedy for OU1 include:

- Excavation of surface and subsurface soil containing contaminants of concern (COCs) above site-specific remedial goal concentrations.

- Contaminated soils that fail the Toxicity Characteristic Leaching Procedure (TCLP) will be treated to meet applicable treatment standards under 40 CFR 268 using solidification/stabilization (S/S) technologies.
- Offsite transportation and disposal of the treated and untreated soil at a RCRA Subtitle D Landfill.
- Backfill the excavated area with clean borrow material obtained from a local source.
- Re-vegetate and restore site to safe and usable conditions.

## STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action is cost effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. The selected remedy satisfies the statutory preference for treatment as a principal element of the remedy (i.e., it reduces the toxicity, mobility, or volume of hazardous substances as a principal element through treatment).

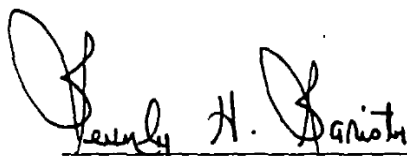
Upon completion of this remedy, no hazardous substances will remain on-site above levels that prevent unlimited use and unrestricted exposure. Therefore, no Five Year Review will be required for this operable unit (OU1).

## DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary Section of this ROD. Additional information can be found in the Administrative Record file for this site.

- Current and reasonably anticipated future land use assumptions and current and potential future beneficial uses of groundwater used in the Baseline Risk Assessment (BRA) and ROD (Page 6-1).
- Estimated capital, annual operation and maintenance (O&M), and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected (Pages 9-1 to 9-2).
- Key factors that led to selecting the remedy (Page 10-1).
- How source materials constituting principal threats are addressed (Page 11-1).
- COCs and their respective concentrations (Appendix B).
- Baseline risk represented by the COCs (Appendix B).
- Cleanup levels established for chemicals of concern and the basis for these levels (Appendix B).

## AUTHORIZING SIGNATURES



Beverly H. Banister, Acting Director  
Waste Management Division  
U.S. Environmental Protection Agency, Region 4

9-19-06

Date

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## Acronyms and Abbreviations

|                |                                                                                     |
|----------------|-------------------------------------------------------------------------------------|
| amsl           | above mean sea level                                                                |
| ARAR           | Applicable or Relevant and Appropriate Requirements                                 |
| bgs            | below ground surface                                                                |
| Black & Veatch | Black & Veatch Special Projects Corp.                                               |
| bls            | below land surface                                                                  |
| BRA            | Baseline Risk Assessment                                                            |
| CERCLA         | Comprehensive Environmental Response, Compensation, and Liability Act of 1980       |
| CERCLIS        | Comprehensive Environmental Response, Compensation and Liability Information System |
| CFR            | Code of Federal Regulation                                                          |
| CLP            | Contract Laboratory Program                                                         |
| COC            | Contaminant of Concern                                                              |
| COPC           | Chemicals of Potential Concern                                                      |
| CSF            | Cancer Slope Factor                                                                 |
| DAF            | Dilution Attenuation Factor                                                         |
| DER            | Data evaluation report                                                              |
| DNAPL          | Dense nonaqueous-phase liquid                                                       |
| EPA            | U.S. Environmental Protection Agency                                                |
| ERRB           | Emergency Response and Removal Branch                                               |
| ESI            | Expanded Site Inspection                                                            |
| FS             | Feasibility Study                                                                   |
| FSP            | Field Sampling Plan                                                                 |
| ft             | feet/foot                                                                           |
| ft/day         | feet per day                                                                        |
| HHRA           | Human Health Risk Assessment                                                        |
| HI             | Hazard Index                                                                        |
| LOAEL          | Lowest-Observed Adverse Effect Level                                                |
| MCL            | Maximum Contaminant Level                                                           |
| µg/kg          | micrograms per kilogram                                                             |
| µg/L           | micrograms per Liter                                                                |
| mg/kg          | milligrams per kilogram                                                             |
| MNA            | Monitored Natural Attenuation                                                       |
| M/T/V          | Mobility/toxicity/volume                                                            |
| NCDENR         | North Carolina Department of Environment and Natural Resources                      |
| NCP            | National Contingency Plan                                                           |
| NOAEL          | No-Observed Adverse Effect Level                                                    |
| NPL            | National Priorities List                                                            |
| O&M            | Operation and Maintenance                                                           |
| OU             | Operable Unit                                                                       |
| PA             | Preliminary Assessment                                                              |

### **Acronyms and Abbreviations (Continued)**

|       |                                                      |
|-------|------------------------------------------------------|
| PAH   | Polynuclear aromatic hydrocarbons                    |
| PCB   | Polychlorinated biphenyls                            |
| PPE   | Primary points of entry                              |
| PRG   | Preliminary Remediation Goal                         |
| PRP   | Potentially Responsible Parties                      |
| QA/QC | Quality Assurance/Quality Control                    |
| RAGS  | Risk Assessment Guidance for Superfund               |
| RAL   | Removal Action Levels                                |
| RAO   | Remedial Action Objective                            |
| RCRA  | Resource Conservation and Recovery Act               |
| RfD   | Reference Dose                                       |
| RFI   | Remedial Field Investigation                         |
| RGO   | Remedial Goal Option                                 |
| RI    | Remedial Investigation                               |
| ROD   | Record of Decision                                   |
| SAP   | Sampling and Analysis Plan                           |
| SARA  | Superfund Amendments and Reauthorization Act of 1986 |
| SI    | Site Inspection                                      |
| SLERA | Screening-Level Ecological Risk Assessment           |
| SQL   | Sample Quantitation Limit                            |
| SSTS  | Sigmon's Septic Tank Service                         |
| SVOC  | Semivolatile Organic Compounds                       |
| TCE   | Trichloroethene                                      |
| TCLP  | Toxicity Characteristic Leaching Procedure           |
| VOC   | Volatile Organic Compounds                           |
| XRF   | X-Ray Fluorescence                                   |

## **DECISION SUMMARY**

## **1.0 Site Name, Location, and Brief Description**

The Sigmon's Septic Tank Superfund site (the "Site") is located at 1268 Eufola Road in Statesville, Iredell County, North Carolina. This location is considered to be a rural area of Iredell, North Carolina. The United States Environmental Protection Agency's (EPA) Identification Number is NCD062555792. The lead agency for the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) regulatory response at the site is EPA. The North Carolina Department of Environment and Natural Resources (NCDENR) is the support agency. The site was placed on the National Priorities List (NPL) on April 27, 2005. The site remediation is planned to be conducted using superfund monies as no potentially responsible parties (PRP) have been identified.

The Sigmon's Septic Tank Service (SSTS), a wholly owned subsidiary of AAA Enterprises, pumped septic tank wastes and heavy sludge from residential, commercial, and industrial customers; installed and repaired septic tanks; and provided a variety of industrial waste removal services. From 1978 to 1992, SSTS disposed of septic wastes in eight to ten unlined lagoons on the south section of the 15-acre property. The waste was described as septage, grease, and milky white liquid. The lagoon area (encompassing all the lagoons) dimensions are 213 feet (ft) by 250 ft wide, or approximately 1.2 acres.

## **2.0 Site Description and Background**

### **2.1 Site Description**

The SSTS site is located at 1268 Eufola Road, approximately 5 miles southwest of Statesville, Iredell County, North Carolina (Figure 2-1). The SSTS is located between Eufola Road to the north and Lauren Drive to the south. Private landowners own the properties located east and west of the SSTS; the Pine Grove Cemetery is also located east of the SSTS. A landing strip is located about 0.5 miles south of the SSTS (Figure 2-2).

The layout and features of the SSTS are shown on Figure 2-3. The SSTS is approximately 15.35 acres in size. According to Iredell County plat maps, the SSTS is divided into two properties at the time of its operation; the southern parcel is 8.9 acres in size and was listed in the name of the deceased Mr. Henry Sigmon, and the northern parcel is 6.45 acres in size and was owned by his daughter, Ms. Mary Sigmon. Mary Sigmon and her family lived in the onsite residence on the northern property. Several years ago, the Sigmon's property was sold; the current owner owns both parcels and resides in the onsite house formerly occupied by Ms. Sigmon. For the purposes of this ROD, the property will continue to be referred to as the "Sigmon Property."

A 1.25-acre pond (former borrow pit) is located south of the Sigmon house. An office trailer is located south-southeast of the pond, and an open-walled, roofed storage shed is located southeast of the office. Access to the interior of the property (i.e., to the office and open-walled shed) is provided by a gravel driveway that runs north-south along the eastern site boundary. At the time of the initial EPA site visit (September 26, 2001), there were empty rusted drums, buckets, old tires, old car seats, and other debris within and near the storage shed; these have been removed since that time. According to Mary Sigmon, these materials are all from her father's operations. The drums formerly contained car wash fluids and/or liquid waste from International Paper.

Six above-ground storage tanks containing liquid wastes were once located approximately 100 feet (ft) south of the shed next to the gravel access road. The six tanks consisted of two rectangular concrete basins (approximately 1,000 gallons each); two cylindrical rusted tanks (approximately 10,000 gallons each); and two cylindrical rusted tanks (approximately 12,000 gallons each). These tanks were also removed by the property owner.

A waste pile and former lagoons are located in the southern portion of the SSTS. Two lightly vegetated, open pits approximately 2 to 3 ft in depth are located near the southeastern corner of the SSTS. The two pits are approximately 30 ft by 10 ft and 15 ft by 8 ft in size. The SSTS is fenced with a 4-ft barbed wire fence, and warning signs are posted on the fence and trees. There are breaks in the fence on the eastern and southern sides of the site.

### **2.2 Background and Operational History**

The SSTS, a wholly owned subsidiary of AAA Enterprises, was owned and operated by the Sigmon family since 1948. In 1970, Henry Sigmon purchased the property at 1268 Eufola Road and moved operations to this location. The business pumped septic tank wastes and heavy sludges from residential, commercial, and industrial customers; installed and repaired septic tanks; and provided a variety of

industrial waste removal services. In 1980, a nephew of Henry Sigmon, Mr. Frank Sigmon, stated to North Carolina Department of Human Services that the septic service had pumped from Barnhardt, Clark Equipment, and Union Glass. In 1996, Henry Sigmon mentioned to the NCDENR that some of the septic wastes came from a medical supply company, Zimmer Industries, and a metal treating business, Ro-Mac Company. Other than those sources mentioned by Mary Sigmon, no other sources of septic waste have been named in the file material.

From 1970 to, 1978, the wastewaters were discharged to the City of Statesville sewer. Around 1973 or 1974, the service received permits and land applied sludges to area farmlands. The process of land application appears to have continued until at least 1989, according to septage management applications filed by AAA Enterprises. The file material does not specify on which properties the sludges were applied and whether the farmlands produced food crops. Around 1978 or 1979, the Sigmons dug several lagoons at the SSTS and began placing septic wastes into these lagoons. Henry Sigmon stated that he had received verbal permission from the Iredell County Health Department and the Mooresville Regional Office of NCDENR to construct and use the lagoons for septage disposal. No permits were issued for the lagoons.

The number and size of the unlined lagoons which originally existed at the site is unclear after a thorough review of the file material. Eight to ten unlined lagoons were utilized to hold septic wastes. Some references indicate the lagoons were uniform in size while others depict lagoons differing widely in size. At times, some of the lagoons were connected with piping (referred to as a septic T) to drain water from other lagoons and facilitate the dewatering of the sludges. As of September 1990, eight unlined lagoons were active; six were used for septic waste and the remaining two for dewatering.

It is unknown if the lagoons ever discharged overland to the surface water pathway. Lotic (i.e., flowing) surface water features near the site consist exclusively of ephemeral drainage ditches that collect stormwater and are the discharge points for shallow groundwater flow at the site. One unnamed drainage feature exists to the south of the site, and another unnamed drainage feature carries drainage from Sigmon onsite toward the west. The nearest perennial creeks or rivers are about one-half mile west and southwest of the site (i.e., Reeder Creek and the Catawba River). Uncontrolled migration of overland stormwater flow may impact several small lentic (i.e., pond) surface water features in the area: Davidson Pond to the south of the site, Sigmon Pond within the site boundaries, and Lambreth and Williams Ponds to the west of the site (Figure 1-3). Further west of these, Sliwinski Pond lies within the drainage ditch system between the site and the Catawba River, and it could receive stormwater flow originating from the site, as well (Figure 2-2).

### **3.0 Community Participation**

W This section summarizes the community relations activities performed by EPA and NCDENR during the investigation and interim remedy selection process. The EPA and NCDENR developed a community relations plan for the site to promote public awareness of cleanup activities and investigations and to promote public involvement in the decision-making process. Community participation activities included community forums, fact sheets, public meetings, and public notices.

The feasibility study (FS) report and the proposed plan for the Sigmon's Septic Tank Superfund site were released to the public for comment on June 19, 2006. These documents were made available to the public in both the administrative record and an information repository maintained at the EPA Superfund Record Center in Region 4 and at the Iredell County Public Library. In addition, over 100 copies of the Proposed Plan were mailed to citizens in neighborhoods adjacent to the site. The notice of availability of these two documents was published in the Statesville Observer on June 19, 2005. A public comment period on the documents was held from June 19 to July 19, 2006.

A public meeting was held on June 22, 2006, at the Iredell County Public Library, Statesville, North Carolina. At this meeting, representatives from EPA, NCDENR, Iredell County, and major property owners answered questions about current conditions at the site and the remedial alternatives under consideration. EPA received no comments during the comment period; therefore, no Responsiveness Summary is included in this ROD.

## **4.0 Scope and Role of Response Action**

The SSTS site involves multiple contamination problems. As with many Superfund sites, the problems at the SSTS site are complex. The Remedial Investigation (RI) conducted for the site identified contamination of soil, groundwater, surface water, and sediments. For the purpose of managing the site-wide response action, the EPA has organized response actions for the site contamination problems into two OUs:

- OU 1 Contamination of soils, surface water, and sediments
- OU 2 Contamination of groundwater.

Further groundwater investigation is needed to fully characterize the extent of groundwater contamination before a ROD for groundwater can be issued. The EPA projects that the groundwater ROD will be issued in 2008. This OU1 ROD presents the investigation results and risk assessment for surface soil, subsurface soil, surface water, and sediment. This OU1 ROD also addresses (and includes in the risk assessment) the groundwater contamination present in potable and monitoring wells sampled on or adjacent to the site; however, recommendations developed from the investigation results will focus on surface and subsurface soil, surface water, and sediment. In addition, groundwater will be considered indirectly as soil contamination will be evaluated for teachability to groundwater, which may result in the requirement to address the soil contamination and direct remediation (treating the groundwater directly, as opposed to remediating soils as the source contamination) of groundwater will be addressed under a separate ROD in OU2.

## **5.0 Summary of Site Characteristics**

### **5.1 Physical Characteristics of the Site**

The SSTS, located in Iredell County, North Carolina, lies within the central portion of the Piedmont Physiographic province in west central North Carolina. The regional topography is characterized by well-rounded hills dissected from the ancient peneplain surface by east-flowing streams and long, undulating ridges trending toward the northwest. Iredell County lies within two river basins: the Catawba River basin in the southeastern portion and the Yadkin River basin in the northwest. U.S. Highway 21 follows the divide separating the Catawba and the Yadkin river basins northward from Mecklenburg County to Troutmans and then north westward followed by a rural road to Alexander County.

The SSTS is located in the southeastern quadrant of Iredell County within the Catawba River basin. Site elevations range between approximately 910 ft above mean sea level (amsl), on the western portion of the site and 960 ft amsl, near the southeast edge of the site. Surface drainage generally flows in a southwesterly direction channeled by two unnamed intermittent streams that converge with the Catawba River approximately 1.5 miles to the southwest.

#### **5.1.1 Climate**

Normal annual precipitation within Iredell County is approximately 48 inches while the mean annual evaporation is approximately 40 inches, with a net annual precipitation of 8 inches. The 2-year, 24-hour rainfall for Iredell County is 3.8 inches.

#### **5.1.2 Geologic Conditions**

The Piedmont Physiographic province is characterized by low to high-grade metamorphosed crystalline rock, which has undergone one or two subsequent regional metamorphic events and up to four deformation events, and some unmetamorphosed intrusive igneous rock. Compositions for both metamorphic and igneous rock range from felsic to ultramafic. The rocks are broken and displaced by numerous faults, and nearly everywhere are rock fractures without displacement. Composite gneiss is the dominant rock type in Iredell County, composed of mica schist interlayered with granite. Hornblende gneiss is common as large mappable bodies and thin sill-like bodies in other rocks. Weathered hornblende gneiss produce deep red soils, whereas soils where hornblende is scarce tend to be sandy and light in color. The largest occurrence of granite is in the Mooresville area where it underlies a broad interstream area. Gabbro occurs in a large area along U.S. Route 70 in the eastern part of the county and also in the southwestern corner of the county. Rocks of the granite-diorite complex have limited occurrence along the southern and eastern borders of the county. Boring logs from six boring locations within 3 to 4 miles of the site indicate that the underlying regolith (weathered rock zone) extends from 10 to 140 ft below land surface (bls). Bedrock consists of biotite gneiss, biotite schist, hornblende gneiss, granite gneiss, chlorite gneiss, and some granite. The SSTS is underlain predominantly by mica schist and granite schist.

### **5.1.3 Hydrogeologic Conditions**

The Piedmont largely consists of an unnamed and unconfined regional aquifer system. The regolith saturated zone varies in depth from 5 to 50 ft bls with a mean depth of 31.3 ft bls. The water table within the regolith zone mimics the land surface topography, although with subdued relief. For this reason, topography can be used to predict the direction of groundwater flow. The Piedmont unconfined aquifer system consists of the regolith, transitional (lower portion of the regolith), and fractured bedrock zones. The saturated regolith provides the bulk of the water storage within the Piedmont groundwater system. Its porosity is between 35 and 50 percent near land surface, and the hydraulic conductivity through the saprolite measures 0.5 to 10 inches per hour [1-20 feet per day (ft/day)]. At the base of the regolith is a zone of weathered boulders and saprolite that has a high relative permeability and can be subject to high groundwater flow. Beneath this is the zone of fractured bedrock. Its capacity as a groundwater reservoir is far less than the saturated regolith zone with a porosity of 0.01 to 2 percent. The hydraulic conductivity of fractured bedrock is generally 0.001 to 3 ft/day. Because much of the flow may be confined to the transition zone and to the top 30 ft of fractured rock, water or contamination can travel under a half mile before discharged into a stream. This relatively quick circulation prevents the water from collecting much mineral matter in solution. With the exception of high iron content in some places, the water is of good chemical quality almost everywhere. Municipal and industrial wells seated in hornblende gneiss yield on average 60 gallons per minute. Depth to the water table, as estimated from site elevations relative to local surface water on the topographic quad, is approximately 10 to 30 ft bls at the SSTS, but can emerge above ground level at local depressions (e.g., ponds).

### **5.1.4 Site-Specific Hydro geology**

Site-specific geological and hydrogeological information was obtained from the February 2005 RI field sampling event (total of 27 soil borings were installed within and immediately surrounding the former lagoons). Materials encountered within the regolith zone generally included the following: sand, silty sand, clayey sand, sandy silt, silt, silty clay, and clay. Materials were commonly red and orange, although tan, gray, and brown materials were also encountered. Depth to the top of competent bedrock, as determined from the refusal of hollow stem augers in soil borings was highly variable in the vicinity of the former lagoons, ranging from 17 to greater than 55 ft bls.

Groundwater levels collected in May 2004 indicate a general westerly groundwater flow direction within the regolith zone, although discrete southwesterly and west-northwesterly components can be distinguished. The estimated range of hydraulic gradient within the regolith zone ranges from 0.005 to 0.01 foot per foot. Any conclusions regarding the characteristics of groundwater geohydrology are complicated by the presence of fractured bedrock features throughout this site and beyond. Such features tend to short-circuit continuous flow patterns and are difficult to characterize with typical well monitoring techniques. Groundwater flow patterns that are influenced by such fractured bedrock features can be misinterpreted or missed altogether. This condition at SSTS is a major reason for addressing groundwater as a separate OU.

## **5.2 Identification of Exposure Pathways**

Exposure pathways are determined in a conceptual site model that incorporates information on the potential chemical sources, release mechanisms, affected media, potential exposure pathways, and known receptors to identify complete exposure pathways. A pathway is considered complete if (1) there is a source or

chemical release from a source; (2) there is an exposure point where contact can occur, and (3) there is a route of exposure (i.e., oral, dermal, or inhalation) through which the chemical may be taken into the body.

### **5.2.1 Conceptual Site Model**

The conceptual site model for this assessment is presented in Figure 5-1. As seen in Figure 5-1 (and discussed previously in Section 2 of this ROD and in EPA's RI report dated March 14, 2006) soil, groundwater, surface water, and sediment contamination at this site occurred because the business pumped septic tank washes and heavy sludges from commercial, residential, and industrial customers and disposed of this waste at the SSTS into tanks, open waste pits, and lagoons. Once released, waste contaminants impacted surface and subsurface soils, surface water, and sediment and the saprolite/partially-weathered rock aquifer underneath the site.

Fractured bedrock underlies the saprolite. Analysis of rock cores showed a diagonal fracture pattern, suggesting pathways for dense nonaqueous-phase liquid (DNAPL) and contaminated groundwater to migrate downward. DNAPL will be addressed as part of the OU2 ROD. The direction of contaminant migration is dependent primarily on the actual geometry of the fracture system, which is not known. Private wells in the area are set in the fractured bedrock. Contamination has been well documented in seven private wells.

Based on this understanding of the distribution of contaminants, and the potential for human contact, the following media/receptors were examined:

- (1) Soil - Potential receptors are current and future workers, site visitors/trespassers, and future residents.
- (2) Groundwater - Potential receptors are current area residents who use private wells and future site residents.

Potentially complete exposure pathways examined in this risk assessment are:

- Incidental ingestion of soil.
- Inhalation of particulates released from soil.
- Dermal contact with soil.
- Ingestion and inhalation of groundwater.

### **5.3 Previous Investigations**

From 1980 through 2002 numerous investigations of the site were performed by federal, state, or local, agencies and/or their consultants. As a result of these investigations, contamination consisting primarily of volatile organics and inorganics were identified in both surface and subsurface soils, onsite stockpiles, as well as groundwater, surface water, and sediment.

A summary of the contamination detected in the previous investigations including the chemicals of concern and remedial goal options can be found in Section 7.0. A more detailed description of these investigations is provided in the following sections:

### **5.3.1 Initial Studies: 1980**

The site was first investigated in June 1980 when the NCDENR inspected the site for septage disposal problems. Nine temporary monitoring wells were installed in the vicinity of the lagoons in September 1980 by the NCDENR. The samples were analyzed for alkalinity, bicarbonate, carbonate, chloride, dissolved solids, hardness, and pH.

In November 1980, SSTS submitted an interim status hazardous waste permit application indicating that the site was used for disposal of hazardous waste. The site was assigned EPA identification number NCD 062 555 792. Over the subsequent 17 months, Mary Sigmon rescinded their permit application as a generator and requested that the facility be reclassified as a transporter of hazardous wastes.

In either 1985 or 1986, two of the lagoons were apparently covered and closed out. In 1987, the NCDENR installed and sampled four additional temporary monitoring wells (MW1 through MW4) along the western edge of the lagoons and south of the storage shed. Analytical results indicated elevated levels of nitrates, barium, chromium, copper, iron, mercury, manganese, and lead above EPA maximum contaminant levels (MCL) or the Title 15A Subchapter 2L Classification and Water Quality Standards Applicable to the Groundwaters of North Carolina. A sample of wastewater from the lagoons was also collected at this time and contained elevated levels of arsenic, aluminum, copper, iron, mercury, magnesium, manganese, lead, and zinc.

Since 1989, SSTS has submitted applications and received permits from the North Carolina Septage Management Program to operate a Septage Management Firm and a Septage Disposal Site. The permit states that pumpings may only be discharged at specified wastewater treatment plants.

### **5.3.2 North Carolina Department of Environment and Natural Resources: 1990**

In June 1990, the NCDENR analyzed groundwater samples from monitoring wells MW3 and MW4 and detected elevated levels of iron, lead, manganese, and mercury above North Carolina groundwater standards. On August 9, 1990, the NCDENR issued SSTS a notice of violation regarding the groundwater contaminant levels. SSTS was required to submit a site assessment report and to install two monitoring wells to replace wells MW1 and MW2 which had been damaged.

### **5.3.3 North Carolina Superfund Section Investigations: 1990**

In September 1990, the NCDENR referred the site to the North Carolina Hazardous Waste Section, which then conducted a site investigation. It was observed that two of the lagoons had been closed out and that two others contained the water run-off from the remaining six lagoons. That water was used for irrigation purposes.

In March 1991, the NCDENR issued a notice of violation for elevated contaminant levels in groundwater collected from onsite monitoring wells. In conjunction with this notice, the Division required the liquid waste and soil in each of the lagoons to be characterized. Also, the NCDENR began collecting groundwater samples from nearby private wells in 1991. Detected concentrations of metals and organic contaminants (some of those detections being elevated relative to screening values) have been found in several samples from those wells.

#### **5.3.4 North Carolina Department of Environment and Natural Resources: 1992**

On August 31, and September 1, 1992, the NCDENR conducted a site investigation and sampling trip to determine whether the wastes in the lagoons were hazardous. Water samples were collected from the eight remaining lagoons and sludge samples were collected from five of the eight lagoons. Analytical results indicated detectable or elevated concentrations of seven metals and 13 volatile organic compounds (VOCs) in the aqueous samples and four metals and 18 VOCs in the sludge samples. All concentrations were below Toxicity Characteristic Leaching Procedure (TCLP) levels; therefore, the site was transferred to the North Carolina Solid Waste Section for continued evaluation.

#### **5.3.5 North Carolina Department of Environment and Natural Resources: 1993**

On May 5, 1993, the NCDENR analyzed groundwater samples from two monitoring wells and found elevated levels of mercury, lead, 2-chlorotoluene, benzene, 1,3,5-trimethylbenzene, -butylbenzene, and naphthalene above the North Carolina groundwater standards. The Sigmons were issued another notice of violation and were ordered to supply an alternate source of drinking water for two residences located approximately 400 ft southwest of the lagoons.

#### **5.3.6 Site Owner Investigation: 1993**

In September 1993, the SSTS hired Shield Environmental Associates, Inc., to sample and characterize the sludges in the eight unlined lagoons to comply with a closure request by the NCDENR. The results indicated elevated levels of total petroleum hydrocarbons, metals, and several organic compounds. Seven of the eight lagoons were closed by April 1995; and the final lagoon, used to store surface water runoff during the closure process, was closed in May 1995. Reportedly, the lagoon sludges were excavated to a depth of 10 ft, mixed with sawdust, and stockpiled in one of the lagoons. The lagoons were backfilled with soil excavated from the northern portion of the site. In late 1996, NCDENR visually estimated the quantity of sludge in the waste pile as 2,000 to 2,700 tons and the areal dimensions of the former lagoon area as approximately 215 ft by 250 ft, or 1.21 acres.

#### **5.3.7 North Carolina Superfund Section Investigation: 1995**

In December 1995, the site was referred to the NCDENR regarding a possible emergency removal action determination for the waste pile. Land application of the sludge was considered but denied due to lack of sufficient acreage to apply the sludge.

#### **5.3.8 EPA's Emergency Response and Removal Branch Investigation: 1996**

In December 1996, the site was added to the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database for further investigation. In January 1997, the NCDENR referred the site to the EPA Region 4 Emergency Response and Removal Branch (ERRB) for a removal evaluation. In April 1997, EPA responded that the site did not meet the criteria for an emergency removal action.

### **5.3.9 North Carolina Superfund Section Investigation: 1998**

In 1998, the North Carolina Superfund Section conducted a combined Preliminary Assessment (PA)/Site Inspection (SI) for the site. The PA/SI included the collection of nine groundwater samples, 15 soil samples (including one duplicate), eight surface water samples (including one duplicate), and nine sediment samples (including one duplicate). The samples were analyzed for inorganics, volatile organics, extractable organics, and polychlorinated biphenyls (PCB). The PA/SI confirmed the presence of groundwater contamination south and east of the site; constituents detected in the wells included barium, chromium, lead, manganese, mercury, chlorobenzene, 1,4-dichlorobenzene, and 1,2-dichlorobenzene. The investigation also confirmed the presence of organic and inorganic contaminants in the soils associated with the lagoons and waste pile. The surface water pathway was also a concern. Samples from two of the primary points of entry (PPE) that were documented as fisheries contained barium, chromium, lead, manganese (Davidson pond), and magnesium (an unnamed tributary). PCBs were not detected above the sample quantitation limit in any of the PA/SI samples.

### **5.3.10 North Carolina Superfund Section Investigations: 2000**

An Expanded Site Inspection (ESI) was completed by the NCDENR in March 2000. The ESI included the collection of nine groundwater samples (including one duplicate), ten soil samples (including one duplicate), six surface water samples, and six sediment samples. The samples were analyzed for inorganics, volatile organics, and extractable organics. One groundwater sample was collected from an onsite monitoring well. The remaining groundwater samples (including one duplicate) were collected from private wells, including one private well that served as a background well. Three of the soil samples (and one duplicate) were collected from the lagoons at depths of 1 to 3 or 1 to 4 ft bls. Two soil samples were collected from the waste pile at a depth of approximately 1 foot into the pile. Two soil samples were collected as background surface and subsurface soil samples. The remaining two soil samples were collected from the drainage ditch on both sides of the culvert leading to the Davidson pond to determine attribution of contamination found in the pond. Two surface water and sediment samples were collected from the Davidson pond, one from the PPE into the pond and one from just upgradient of the discharge culvert from the pond to the downgradient surface water pathway. One surface water and sediment sample was collected at the PPE into the perennial stream located southwest of the site. Two surface water and sediment samples were collected upstream of that PPE as attribution samples. One surface water and sediment sample was collected from the West's pond to serve as a background sample.

Several constituents were detected in groundwater samples at concentrations either two times greater than background levels or exceeding sample quantitation limits (SQL), including: aluminum [8,800 micrograms per liter (µg/L)], arsenic (4.2J µg/L), barium (83 to 620 µg/L), chromium (86 µg/L), cobalt (1.2 to 39 µg/L), iron (11000 µg/L), manganese (15 to 27,000 µg/L), mercury (1.1J to 6.6J µg/L), nickel (2.3 to 73 µg/L), 1,1-dichloroethane (3 µg/L), 1,2-dichlorobenzene (8 µg/L), 1,3-dichlorobenzene (1 µg/L), 1,4-dichlorobenzene (2 to 11 µg/L), acetone (5J to 29J µg/L), benzene (2 µg/L), chlorobenzene (72 µg/L), chloroethane (1 µg/L), cis-1, 2-dichloroethene (3 µg/L), and total xylenes (2 µg/L). Analytical results are summarized in Table 5-1.

The soil samples collected from the waste pile were compared to the surface soil background sample; the soil samples from the lagoon were compared to the subsurface soil background sample. The following

constituents were detected in the waste pile samples at concentrations either two times greater than the surface soil background concentration or exceeding the SQLs: aluminum [ 1,000 milligrams per kilogram (mg/kg)], antimony (42J mg/kg), arsenic (3.2 to 3.8 mg/kg), barium (230 to 310 mg/kg), cadmium (3.9J to 4.6J mg/kg), chromium (60 to 75 mg/kg), copper (200J to 380J mg/kg), iron (17,000 to 23,000 mg/kg), lead (180J mg/kg), manganese (180 to 290 mg/kg), mercury (0.26 to 0.56 mg/kg), nickel (61 to 74 mg/kg), silver (3.5 mg/kg), vanadium (41 to 49 mg/kg), zinc (870 to 880 mg/kg), 3- and/or 4-methylphenol [7,200J micrograms per kilogram (µg/kg)], 1,1-biphenyl (1,700J µg/kg), 4-chloroaniline (3,400J to 1,400J µg/kg), 1,2-dichlorobenzene (250 µg/kg), 1,3-dichlorobenzene (19 µg/kg), 1,4-dichlorobenzene (24 to 120 µg/kg), 2-methylnaphthalene (1,900J to 3,600J µg/kg), acetone (21 µg/kg), benzyl butyl phthalate (220,000 µg/kg), bis(2-ethylhexyl) phthalate (38,000 to 240,000 µg/kg), chlorobenzene (11J µg/kg), ethyl benzene (41 µg/kg), methyl butyl ketone (270 µg/kg), methylcyclohexane. (40 µg/kg), naphthalene (2,500J to 3,700J µg/kg), phenanthrene (1,800J µg/kg), toluene (63 µg/kg), and total xylenes (200 µg/kg). Analytical results are summarized in Table 5-2.

The following constituents were detected at elevated concentrations in the lagoon soil samples when compared to the background subsurface soil sample: antimony (25J to 29J mg/kg), barium (140 to 1,400 mg/kg), cadmium (0.57J to 3.8J mg/kg), chromium (40 to 140 mg/kg), copper (64J to 340J mg/kg), lead (84J to 250J mg/kg), manganese (160 to 240 mg/kg), mercury (0.51 to 0.8 mg/kg), nickel (20 to 350 mg/kg), selenium (1.6J to 2.5J mg/kg), silver (3.2 mg/kg), zinc (310 to 1400 mg/kg), 3- and/or 4-methylphenol (23,000 to 48,000 µg/kg), 1,1-biphenyl (2,100J to 3,500J µg/kg), 4-chloroaniline (9,400J to 14,000J µg/kg), 1,3-dichlorobenzene (76 to 170 µg/kg), 1,4-dichlorobenzene (44 to 290 µg/kg), 2-methylnaphthalene (2,200J to 4,300J µg/kg), acetone (43 to 160 µg/kg), benzaldehyde (3,000J µg/kg), benzene (14J to 18 µg/kg), bis(2-ethylhexyl) phthalate (920 to 100,000 µg/kg), chlorobenzene (74 to 5,000J µg/kg), cyclohexane (39 µg/kg), dimethyl phthalate (47,000 µg/kg), emyl benzene (190 to 300 µg/kg), isopropylbenzene (11J to 16J µg/kg), methyl ethyl ketone (34 to 76 µg/kg), methyl isobutyl ketone (80 µg/kg), methylcyclohexane (26 to 180 µg/kg), naphthalene (2,000J to 11,000J µg/kg), toluene (210 to 7,000J µg/kg), and total xylenes (15J to 1,300 µg/kg). Analytical results are summarized in Table 5-2.

The soil samples collected in the drainage ditch were compared to the background surface soil sample. The following constituents were detected at elevated concentrations when compared to the background surface soil sample: aluminum (30,000 mg/kg), arsenic (2.7 to 3.4 mg/kg), barium (85 to 160 mg/kg), chromium (21 to 31 mg/kg), cobalt (7.8J mg/kg), copper (10J to 24 J mg/kg), iron (19,000 to 20,000 mg/kg), lead (12J to 13J mg/kg), manganese (1,300 to 4,200 mg/kg), nickel (8.2 to 17 mg/kg), vanadium (45 to 46 mg/kg), zinc (36 to 100 mg/kg), benzaldehyde (440J µg/kg), benzo(a) anthracene (830 µg/kg), benzo(a) pyrene (730 µg/kg), benzo(b) fluoranthene (960 µg/kg), benzo(k) fluoranthene (840 µg/kg), chrysene (920 µg/kg), dimethyl phthalate (460 µg/kg), fluoranthene (1,600 µg/kg), phenanthrene (1,200 µg/kg), and pyrene (1,600 µg/kg). Analytical results are summarized in Table 5-2.

Surface water sample SST-023-SW was considered a background sample during the ESI; however, it was collected from a surface water pathway that could potentially be impacted by the site. The following constituents were detected in surface water samples at elevated concentrations when compared to background sample SST-021-SW: aluminum (1,900 µg/L), arsenic (3.6J to 18J µg/L), barium (14 to 210 µg/L), cadmium (1 to 1.2 µg/L), cobalt (4.8 to 14 µg/L), iron (740 to 7,000 µg/L), lead (1.3 to 4.1 µg/L), manganese (35 to 1,300 µg/L), nickel (4.3 to 11 µg/L), and zinc (85 to 220 µg/L). The highest concentrations of these constituents were typically found in the samples collected from the Davidson pond. Analytical results are summarized in Table 5-3.

Sediment sample SST-023-SD was considered a background sample during the ESI; however, it was collected from a surface water pathway that could potentially be impacted by the site. The following constituents were detected in sediment samples at elevated concentrations when compared to background sample SST-021-SD: arsenic (8 mg/kg), barium (210 mg/kg), chromium (46 mg/kg), copper (37J mg/kg), iron (3,200 to 37,000 mg/kg), manganese (280 to 380 mg/kg), nickel (21 mg/kg), and zinc (150 mg/kg). Analytical results are summarized in Table 5-4.

The two soil samples collected from the drainage ditch upgradient of the Davidson pond have also been included on Table 5-3. Although not detected above the SQLs of the background sediment sample, numerous polycyclic aromatic hydrocarbons (PAH) were detected in the Davidson pond. Many of these constituents were also detected in the soil sample SST-018-SL collected in the drainage ditch between the road and the pond, indicating that contamination in the pond may be attributable to a source other than the site.

### **5.3.11 EPA's Superfund Remedial Site Evaluation Branch: 2002**

In May 2002, the EPA conducted a geophysical investigation at the SSTS. The objective was to obtain information on the location of the former lagoons and pits which would guide future soils sampling and support the RI/FS for the SSTS. The results of that investigation, documented in the Geophysical Investigation Report for Sigmon 's Septic Tank Site, Statesville, North Carolina, indicated the presence of both non-ferrous and ferrous metallic, non-native materials in the subsurface soil at the SSTS. Those results were used to guide future soil sampling investigations. That geophysical investigation report is presented in Appendix A of the ROD.

In October 2004, a data evaluation report (DER) was completed by the EPA. The DER evaluated the usability of data collected by the RI project team to support project conclusions and recommendations for the SSTS RI/FS. The DER summarized and evaluated data collected from the October 2002, March and April 2003, and May 2004 sampling events. An additional field investigation was conducted in February 2005 to primarily address the delineation of soil contamination at the SSTS. A DER was not written for the February 2005 soil data; however, the OU 1 RI report reviews, evaluates, and discusses this new data set in detail. Therefore, a separate DER was not necessary. The October 2002, March and April 2003, May 2004, and February 2005 sampling investigations and data sets collected during the remedial field investigations (RFI) are presented and outlined in Appendix B, in Tables 5-1 through 5-13.

### **5.3.12 EPA's Emergency Response and Removal Branch: 2006**

In November 2005, the site was referred to ERRB regarding a possible time-critical removal action for the residential wells. As discussed in Section 5.4.5, several potable w wells in the vicinity of the site were contaminated with inorganic and organic contaminants. The ERRB installed filters on these wells in April 2006.

## **5.4 Remedial Investigation**

### **5.4.1 Source Areas**

The contaminant source areas at the SSTS site consist of soil and debris associated with eight to ten unlined

lagoon pits created by the site owners in 1978 or 1979.

### **5.4.2 Nature and Extent of Contamination**

The OU1 (soil) RI for this site successfully delineated the nature and extent of contamination in all media, except groundwater. The groundwater will be further investigated as OU2. This section discusses the nature and extent of contamination at the SSTs. This evaluation is based on a detailed discussion of analytical results associated with environmental media samples collected during RI fieldwork conducted between October 2002 and February 2005.

### **5.4.3 Surface and Subsurface Soil Sampling**

In 2002, a total of 12 surface soil samples including one duplicate and 20 subsurface soil samples/borings including one duplicate were collected. In 2004, a total of 15 surface soil samples including one duplicate and 17 subsurface soil samples/borings including one duplicate were collected during the field investigation.

Additional soil sampling was proposed for 2005 to determine the nature and extent (both vertical and aerial) of soil and subsurface soil contamination above screening standards in order to support selection and implementation of a cleanup remedy. Therefore, a 2,500-ft by 1,000-ft grid with 125 locations covering onsite and offsite areas was proposed in the Field Sampling Plan (FSP).

In addition to duplicates and other Quality Assurance/Quality Control (QA/QC) samples, the FSP proposed a total of 56 surface soil grid (depth interval 0 to 12 inches) samples to be collected from within the site boundary (i.e., within the dashed line shown on Figure 5-3). The surface soil samples from grid nodes within the site boundary were to be shipped to an analytical laboratory for full metal scan analysis. Twelve of these samples also were analyzed for dioxins/furans. The approximate locations of these 12 samples are presented on Figure 5-3. Table 5-14 presents the locations and selection rationale for surface soil samples collected for laboratory analysis in 2005.

A total of 69 surface soil (depth interval 0 to 12 inches) sample locations were proposed for x-ray fluorescence (XRF) analysis. These 69 locations were selected from among the 125 grid nodes within the site boundary (i.e., within the dashed line shown on Figure 5-6). Collocated subsurface soil samples (1 to 2 ft bls) were proposed for XRF analysis at locations where surface soil XRF results showed concentrations of an indicator metal (i.e., aluminum) to be above screening standards. The sampling grid was to be extended if XRF results showed additional delineation as necessary. Additional XRF data were collected from seventeen subsurface soil sample locations at various intervals at each boring location. Confirmatory soil samples were collected from 20 percent of the proposed XRF analysis locations outside of the site boundary (i.e., outside of the dashed line shown in Figure 5-3). The confirmatory surface soil samples were submitted to the Contract Laboratory Program (CLP) laboratory. An additional 56 surface soil sample locations from within the dashed line were proposed for XRF analysis; these are shown on Figure 5-6. Table 5-14 presents the proposed 2005 soil sample locations and rationale.

During the February 2005 field investigation, a total of 79 surface soil samples (including nine duplicates) and 40 subsurface soil samples/borings (including five duplicates) were collected and shipped for analysis. The Sampling and Analysis Plan (SAP) proposed a composite sample from 0 to 12 inches; however, during

the field investigation, a composite sample was collected from 0 to 6 inches to represent a surface soil sample. It was concluded that a sample from 0 to 6 inches would be more representative of site conditions and that this data would be better used in the Human Health Risk Assessment (HHRA). Soil sample SS-SF-01BG and SS-SB-01BG were designated as background : samples because they were collected adjacent to SS-MW-10B, which was designated as H the background monitoring well. A total of 106 surface and 77 subsurface analytical soil samples were collected from the 2002, 2004, and 2005 field investigations. Figures 5-4 and 5-5 present 2002, 2004, and 2005 the locations from which surface and subsurface soil samples, respectively, were collected for laboratory analysis. Surface and subsurface soil locations analyzed by XRF are shown in a separate map.

One hundred twenty-five surface soil (0-12 inches bis) samples were proposed for XRF analyses. During the February 2005 field investigation the following nine samples location were not collected because the property owner refused to allow access: SS-SF/SB-A12, SS-SF/SB-A14, SS-SF/SB-A16, SS-SF/SB-A18, SS-SF/SB-A20, SS-SF/SB-A22, SS-SF/SB-B15, SS-SF/SB-B17, and SS-SF/SB-B19. An additional two sample locations (SS-SF/SB-B21 and SS-SF/SB23) were analyzed using the XRF; however, these data were not retrievable from the XRF unit. XRF data were proposed to be obtained from a composite surface soil sample collected from a soil core taken from 0 to 12 inches. During the sampling event, field personnel modified the data collection procedure to allow surface soil samples XRF readings to be taken in-situ from both 0 inches and 6 inches. Due to extreme surface soil saturation caused by intense storm activity, field personnel had difficulty collecting and homogenizing surface soil at most locations. A composite surface soil sample was not prepared for XRF analysis because the ground was saturated. Furthermore, field personnel judged that the in-situ XRF data from 6 inches below ground surface (bgs) was more representative of typical surface soil conditions than the in-situ XRF data from the surface (i. e., 0 inches). Confirmatory sample selection from these XRF analysis locations was based on the 6-inch XRF sample analysis.

During the February 2005 sampling event, a total of 226 surface soil (a combination of 0-inch and 6-inch in-situ XRF readings) and 146 subsurface soil samples were analyzed by XRF. Figures 5-6 and 5-7 show the surface and subsurface soil locations, respectively, from which XRF data were obtained.

#### **5.4.4 Surface Water and Sediment Sampling**

In 2002, eight surface water samples (including one duplicate) were collected from locations collocated with sediment samples. In 2004, one surface water sample and four sediment samples were collected. These samples were collected to provide data for the ecological risk assessment, establish upgradient background concentrations, examine surface water to groundwater discharge, and determine the nature and extent of offsite contamination in these media. SS-SW-01 and SS-SD-01 were designated as background samples because they are upgradient and relatively distant from the site. Figure 5-8 presents the 2002 and 2004 surface water and sediment sample locations.

#### **5.4.5 Existing Private Potable Well Sampling Locations**

Between 1991 and 1999, groundwater samples were collected from 11 nearby private wells (see Figure 9). Approximately 36 samples were collected and analyzed for nitrates, sulfates, metals, VOCs, and semivolatile organic compounds (SVOCs). Table 5-5 summarizes the analytical results. Private wells PW2

and PW3 detected concentrations for six chemicals (i.e., nitrates, iron, manganese, mercury, 1,4-dichlorobenzene, and 1,2-dichloroethane) that exceeded the EPA's National Primary Drinking Water Standards.

In 2002, private potable wells SS-PW-01, SS-PW-03, SS-PW-04, SS-PW-05, SS-PW-06, SS-PW-07, SS-PW-08, and SS-PW-09 were sampled. A total of nine groundwater samples including one duplicate were sampled from potable wells during the 2002 field event. Due to its location, SS-PW-07 was designated as a background private potable well sample.

The Maximum Contaminant Level (MCL) for lead (15 mg/L) was exceeded in the 2002 potable well sample SS-PW-09 (from the Lee residence) with a result of 50 mg/L. To determine if an emergency action was required, the well was re-sampled in March and April 2003 by Black & Veatch. In March 2003, the well was sampled at the well spigot per the technique used for the other RI potable well samples. In April 2003, the spigot was again sampled, and filtered and unfiltered samples of the kitchen tap were collected. All 2003 sample results were under the 15 mg/L MCL.

In 2004, eight private potable wells were sampled (SS-PW-01, SS-PW-03, SS-PW-04, SS-PW-05, SS-PW-06, SS-PW-08, SS-PW-09, and SS-PW-10). A total of nine groundwater samples, including one duplicate, were collected from potable wells during the 2004 sampling event. The concentrations found in some of these drinking water wells exceeded EPA's National Primary Drinking Water Regulations for MCLs. The results are shown in Table 5-5.

## **5.5 Summary of Remedial Investigation**

Numerous samples of media from the suspected source area were analyzed for inorganics, dioxins/furans, semivolatile organics, pesticides/PCBs, and volatile organics. A number of these analytes were detected among the various media samples; however, not all analyte detections exceeded corresponding screening values. The analytical data obtained from these sampling efforts suggests that the nature of contamination at the SSTS is relatively narrow in scope, limited to primarily metals with some localized SVOCs and VOCs contamination. This is summarized in Table 5-15 of the ROD, which indicates the presence of detected concentrations by a single check-mark (✓) and the presence of concentrations exceeding screening values by a double check-mark (✓✓).

Samples of media from the source area contain consistent and frequent detections and screening value exceedences of the following metals: aluminum, arsenic, barium, calcium, chromium, copper, iron, lead, magnesium, manganese, nickel, and zinc. w Samples of surface soil and subsurface soil contain frequent detections and a few screening value exceedences of a number of SVOCs [e. g., naphthalene, various PAHs, bis-(2-ethylhexyl) phthalate, 1, 1-biphenyl] and some pesticides (e.g., alpha-chlordane, gamma-chlordane, heptachlor epoxide, alpha-BHC, beta-BHC, 4,4'-DDE and 4,4'-DDT).

Subsurface soil contains many VOCs, including chlorinated compounds (e.g., 1,4-dichlorobenzene, total xylenes, trichloroethene (TCE), toluene, and tetrachloroethene); surface soil contains very few VOC detections and no screening value exceedences (Tables 5-6 through 5-13).

Subsurface soil associated with the site boundaries may be impacted by site-related contamination through infiltration of precipitation, percolation of contaminants associated with the downward migration of

storm-water, and soil grading activities involving trenching and digging into the subsurface.

Numerous samples of surface soil, subsurface soil, surface water, and sediment were analyzed for inorganics, dioxins/furans, semivolatile organics, pesticides/PCBs, and volatile organics. A number of these analytes were detected among the various media samples; however, not all analyte detections exceeded corresponding screening values. The analytical data obtained from these media sampling efforts suggests that the nature of contamination at the SSTS is relatively narrow in scope, limited to primarily metals with some isolated occurrences of a few organics. The analytical data is summarized in Tables 5-6 through 5-13.

Samples of surface water and sediment contain consistent and frequent detections and screening value exceedences of the following metals: aluminum, arsenic, barium, calcium, chromium, copper, iron, lead, magnesium, manganese, nickel, and zinc. Surface water and sediment contain very few VOC detections and no screening value exceedences (Tables 5-6 through 5-13).

### **5.5.1 Area of Contamination Proposed for Remedial Action**

Onsite contaminated surface soil poses a potential risk to human health. In addition, the contaminated surface and subsurface soil is potentially an ongoing source for groundwater contamination. However, OU2 will address both onsite and offsite sources of groundwater contamination at the site. The FS addressed the onsite source in order to minimize additional release of source contaminants to groundwater. Remedial alternatives for the area of contaminated soil identified during the RI were presented in the FS.

Figure 5-2 indicates the area of soil contamination that will be addressed as part of the remedial action. Soil contaminant levels pose a human health risk and, as indicated above, contaminant levels in surface and subsurface soils may also impact groundwater. The potential for soil contamination to impact groundwater in conjunction with the MCL exceedances present in groundwater suggest the need to evaluate a soil remediation goal based on groundwater protection. Based on the site cleanup goals, approximately 9,000 cubic yards of surface and subsurface soils in the lagoon area would need to be addressed as part of the remedial action. Addressing these soils would also address other contaminants that may exceed North Carolina concentration for soil to groundwater leaching.

## **5.6 Contaminant Fate and Transport**

The primary sources of contamination at the site are summarized in Section 5.2.1 of this report. Almost all contaminant inputs at the site occurred prior to 1990. The time lag between the last contaminant input and current conditions has direct implication on the aging and equilibration of contaminants in the environment. Volatilization is a relatively rapid process that can occur soon after entry to the environment. Solubility also is a relatively rapid process; most of the mass of soluble contaminant can dissolve soon after entry into the environment. For partially or slightly soluble material, there could be ongoing dissolution over time as new (fresh) solvent (e.g., percolating storm water) is introduced to the contaminant source. Adsorption mechanisms over time may trend toward stronger bonding strength resulting in the contaminant being more tightly-bound to the sorbent (e.g., soil particle, organic matter, mineral crystal, etc.).

Based on the nature of the contamination at the site and the physical characteristics of the site, potential routes of contaminant migration likely include the following:

- Slow migration due to strong binding of contaminants to surface and subsurface soil media:
- Dissolution and migration with percolating storm water (i. e., in the vertical direction from surface soil to subsurface soil to groundwater).
- Overland transport of bound contaminants associated with water-eroded soil media (i.e., from surface source areas along drainage pathways to aquatic media).
- Movement of bound contaminants associated with soil or water media incidentally attached to mobile receptors such as human workers, human residents, ecological species, etc.

Any metals present in the surface or subsurface soil media at the site are likely in the form of insoluble minerals because more readily soluble metal species likely already have dissolved and moved off site since the initial contaminant input(s). These migration routes are summarized further in the following sections.

### **5.6.1 Soil-to-Groundwater Migration**

Analytical data shows similar contaminants detected in surface soil, subsurface soil, and shallow groundwater. These results suggest that contaminants have migrated downward since the initial source inputs during periods of active site-use. Likely migration downward is based on two mechanisms: (1) dissolution of soil-bound or soil-associated contaminants in infiltrated storm water followed by the downward percolation of storm water flow through soil and (2) downward migration of soil particles due to mixing and settling.

### **5.6.2 Soil-to-Surface Water/Sediment Migration**

Topography at the site may have changed over time. Currently, topography supports retention of storm water on the southern portion of the site or migration of storm water to the central areas of the site boundary. In the past, eroded contaminated soil may have been carried overland in one of two directions: (1) south toward the ephemeral drainage features located to the south of the site (e.g., unnamed drainage tributary and Davidson Pond) and (2) north toward the central portion of the site where Sigmon Pond is located. From this dispersion of contaminants, additional transport can occur from cycles of suspension and deposition of contaminated soil/sediment.

### **5.6.3 Groundwater-to-Surface Water Migration**

Based on empirical observations of surface water features near the site, shallow groundwater likely is connected to the several surface impoundment ponds and drainage ditches located within and around the site. This suggests that groundwater can emerge from the subsurface into these surface features; thus, contaminated groundwater can migrate from the subsurface to the surface water and further downgradient along the surface water drainage pathways.

## **6.0 Current and Potential Future Land and Resource Use**

The property, which has been used for industrial purposes since 1973, is presently zoned residential; and, it is not anticipated that the land use will change in the future.

### **6.1 Groundwater Use**

No municipal water supply wells exist within a 4-mile radius of the site. The City of Statesville obtains water from a surface water intake on the South Yadkin River. The intake, located 5.5 miles north of the City of Statesville, is not influenced by the SSTS site. Although the city has not extended any water lines within four miles of the site, West Iredell Water Corporation and the City of Troutman supply water to areas within four miles of the site.

Five community wells within the 4-mile radius of the site provide drinking water to subdivisions and mobile home parks. The remaining population relies on private potable water wells for drinking. Numerous potable water wells are located on or near the site, including the Sheppard, former Cascadden, Lamberth, and Davidson wells. Additionally, two supply lines connected to the Davidson well provide drinking water to several rental properties owned by Mr. Chris Davidson that border the site.

### **6.2 Surface Water Use**

Intermittent streams and drainage swales drain the site to the west and southeast. There are no drinking water intakes located within the 15-mile surface water pathway. The perennial stream, downstream of the confluence of the intermittent streams that drain the site, is a fishery mostly in the spring. It discharges into the Catawba River; the 15-mile stretch of the Catawba River is heavily fished for human consumption. The Catawba River is protected by NCDENR classification as a water supply in moderate to highly developed watershed, utilized for primary recreation, and a critical area. Additionally, the Catawba River feeds another recreationally fished water body, Lake Norman.

### **6.3 Estimated Demography and Land Use**

The population of Iredell County was 122,660 in the year 2000. Statesville, the County w Seat, is the largest population center in the county. Within the vicinity of the site, land use is dominated by rural and residential properties. Numerous residences surround the site, and cattle graze on properties owned by Mr. Lamberth and Mr. Davidson that border the site.

### **6.4 Endangered and Threatened Species.**

Information from the North Carolina Natural Heritage Program (NCNHP) was reviewed to identify important areas and species that have regulatory protection under Federal and State of North Carolina laws. While site-specific information for these species and habitats at the site was unavailable, NCNHP has published lists of these species that have been recorded in Iredell County. This list is presented in Table 6-1. Table 6-1 also identifies those threatened species, endangered species, and species of special concern, or their habitat, that was observed in the vicinity of the site. There were no threatened or endangered species

observed during ecological reconnaissance investigations. The highfin carpsucker (*Carpiodes velifer*) is listed as a state species of special concern in the Catawba River. The Duke Power State Park was also identified as a natural area present within a three-mile radius of the site. Suitable habitat for most of the threatened species, endangered species, and species of special concern was available throughout portions of the site.

## **7.0 Summary of Site Risks**

Based upon the results of the RI, a Baseline Risk Assessment (BRA) was conducted to estimate the risks associated with current and future site conditions. A BRA is an analysis of the potential adverse human health and ecological effects caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these under current and anticipated future land uses. This section of the ROD summarizes the results of the BRA for the SSTS.

The risk assessment document for this Site, entitled Final Baseline Risk Assessment for Human Health (March 2006) is available in the Administrative Record file.

### **7.1 Human Health Risk Assessment**

A Superfund Baseline Human Health Risk Assessment (HHRA) is an analysis of the potential adverse health effects caused by hazardous substance exposure from a site in the absence of any action to control or mitigate these under current and future land uses. Preparation of a Baseline HHRA is required by the National Contingency Plan (NCP), which states that the lead agency for a Superfund site shall conduct a site-specific Baseline HHRA as part of the RI process (40 CFR 300.430). A four step process is utilized for assessing site related human health risks for reasonable maximum exposure scenarios.

### **7.2 Identification of Contaminants of Concern**

Chemicals of potential concern (COPC) are chemicals whose data are of sufficient quality for use in the quantitative risk assessment, are potentially site-related, and represent the most significant contaminants in terms of potential toxicity to humans.

The data used to conduct the Baseline HHRA were obtained during field investigations conducted at the site in 2002, 2003, 2004, and 2005. The data were summarized to show all organic and inorganic chemicals that were positively identified in at least one sample. Included in this group were qualified and unqualified results. Results qualified with the "J" flag were detected concentrations that were considered to be present at estimated concentrations. The uncertainty in the absolute value may result in the actual concentration being under- or over-estimated. Chemicals identified as tentatively identified (i.e., those qualified with the "N" flag) were not included in the Baseline HHRA.

Laboratory data were tabulated to show the range of detections above the sample quantitation limit (SQL), the number of detections above the SQL, and the number of samples that were collected. Finally, the positively identified chemicals were screened to exclude chemicals that, although present, are not important in terms of potential human health effects. The categories for the screening criteria include:

- Inorganics that are essential nutrients or normal components of human diets were excluded. Calcium, magnesium, potassium, and sodium were excluded because they are essential nutrients.
- Organic and inorganic chemicals whose maximum concentration was lower than a risk-based concentration corresponding to an excess cancer risk of  $1 \times 10^{-6}$  or a hazard quotient (HQ) level of 0.1 using residential land use assumptions were excluded.

The chemicals of concern (COCs) for the SSTs were derived from the COPCs identified using the screening process described above. COCs are the most significant contaminants in an exposure scenario that exceed an excess cancer risk level of  $1 \times 10^{-4}$  or a hazard index (HI) of 1. More specifically, COCs have either individual excess cancer risk levels equal to or greater than  $1 \times 10^{-6}$  or an HQ equal to or greater than 0.1 in a given exposure scenario. COPCs that exceed state or federal ARARs are also COCs. Tables 7-1 and 7-2 summarize the COCs, range of detections, exposure point concentration used to estimate risk, and location of maximum detected concentration for the specified chemical.

### 7.3 Exposure Assessment

An exposure assessment identifies pathways where receptors may be exposed to site contaminants and estimates the frequency, duration, and magnitude of such exposures. Exposure assessment involves characterization of the environmental setting, identification of exposure pathways, and quantification of exposure.

As shown in Figure 7-1, exposure pathways are determined in a conceptual site model (CSM) that incorporates information on the potential chemical sources, release mechanisms, affected media, potential exposure pathways, and know receptors to identify complete exposure pathways. A pathways is considered complete if there is a source or chemical release from a source, an exposure point where contact can occur, and when there is a route of exposure (oral, dermal, or inhalation) through which the chemical may be taken into the body.

Based on the distribution of contaminants and the potential for human contact, the following media, receptors, and exposure routes were examined:

| <b>Media</b>    | <b>Receptor</b>       | <b>Exposure Route</b>                        |
|-----------------|-----------------------|----------------------------------------------|
| Surface Soil    | Adolescent Trespasser | Ingestion and Dermal Contact                 |
|                 | Worker (Outdoor)      | Ingestion and Dermal Contact                 |
|                 | Construction Worker   | Ingestion, Dermal Contact, and Inhalation    |
|                 | Residents             | Ingestion and Dermal Contact                 |
| Subsurface Soil | Construction Worker   | Ingestion, Dermal Contact, and Inhalation    |
| Groundwater     | Worker (Outdoor)      | Ingestion                                    |
|                 | Construction Worker   | Ingestion                                    |
|                 | Residents             | Ingestion/Inhalation of VOCs While Showering |

Human intakes were calculated for each chemical and receptor using the reasonable maximum exposure (RME) concentrations. Estimates of human intake, expressed in terms of mass of chemical per unit body weight per time (mg/kg-day), were calculated differently depending on whether the compound is a noncarcinogen or carcinogen. For noncarcinogens, the intake was averaged over the duration of exposure and is referred to as the average daily dose (ADD). For carcinogens, the intake was averaged over the average lifespan of an individual (70 years) and is referred to as the lifetime average daily dose (LADD). ADDs and LADDs were calculated using standard assumptions and professional judgment.

The RME concept was used to develop exposure doses for the scenarios evaluated in the Baseline HHRA. The RME is defined as the maximum exposure that is reasonably expected to occur at a site.

## 7.4 Toxicity Assessment

Toxicity assessment is a two-step process where the potential hazards associated with route-specific exposure to a given chemical are: 1) identified by reviewing relevant human and animal studies, and 2) quantified through analysis of dose-response relationships. EPA has conducted numerous toxicity assessments that have undergone extensive review within the scientific community.

EPA toxicity assessments and the resultant toxicity values were used in the Baseline HHRA to determine both carcinogenic and non-carcinogenic risks associated with each COC and route of exposure. EPA toxicity values that were used in this assessment include:

- Reference dose values (RfDs) for noncarcinogenic effects.
- Carcinogenic slope factors (CSFs) for carcinogenic effects.

RfDs have been developed by EPA for indicating the potential for adverse health effects from exposure to chemicals exhibiting noncarcinogenic (systemic) effects. RfDs are ideally based on studies where either animal or human populations were exposed to a given compound by a given route of exposure for the major portion of the life span (referred to as a chronic study). The RfD is derived by determining dose-specific effect levels from all the available quantitative studies, and applying uncertainty factors to the most appropriate effect level to determine an RfD for humans. The RfD represents a threshold for toxicity. An RfD reflects the human lifetime exposure to a given chemical via a given route at a dose that should not result in adverse health effects, even for the most sensitive members of the population.

RfDs for inhalation exposure (RfDi) are derived from reference concentration values (RfCs). RfCs are concentrations in air, expressed in  $\text{mg}/\text{m}^3$ , that are thought to represent a level without appreciable risk of deleterious effects during a portion of the lifetime. A human body weight of 70 kg and an inhalation rate of  $20 \text{ m}^3/\text{day}$  are used to convert between a concentration in air (RfC) expressed in  $\text{mg}/\text{m}^3$  and an inhaled intake expressed in units of  $\text{mg}/\text{kg}\cdot\text{day}$ .

CSFs are route-specific values derived only for compounds that have been shown to cause an increased incidence of tumors in either human or animal studies. The CSF is an upper bound estimate of the probability of a response per unit intake of a chemical over a lifetime and is determined by low-dose extrapolation from human or animal studies. When an animal study is used, the final CSF is adjusted to account for extrapolation of animal data to humans. If the studies used to derive the CSF were conducted for less than the life span of the test organism, the final CSF is adjusted to reflect risk associated with lifetime exposure.

The RfDs and CSFs used in this assessment were primarily obtained from EPA's IRIS database (EPA, 2006). Values that appear in IRIS are considered Tier 1 sources because they have been extensively reviewed by EPA work groups and thus represent Agency consensus. If no route of exposure or values for a given compound were listed in IRIS, Tier 2 and 3 values were consulted. Tier 2 values are those considered provisional peer-reviewed toxicity values and Tier 3 values are obtained from sources that are

considered outdated but usable for information purposes only. Remediation at the site should not be driven by these values. Tier 3 values include the Region 9 preliminary remediation goals (PRGs) and EPA's National Center for Environmental Assessment (NCEA).

All of the COCs have toxicity data indicating their potential for adverse non-carcinogenic health effects in humans via the oral and dermal routes. The available toxicity data from chronic animal studies indicate that aluminum and manganese (food and water) affects the central nervous system, arsenic affects the skin, barium affects the kidney, iron affects the liver, thallium chloride affects the blood, mercuric chloride produces autoimmune effects, zinc affects the blood, and no target organs were reported for chromium and vanadium. The RfDs were obtained for aluminum (1.0E+00 mg/kg/day), chromium (3E-03 mg/kg/day), iron (3E-01 mg/kg/day) manganese (food and water) (7.0E-02 mg/kg/day), and vanadium (1E-03 mg/kg/day); however, thallium chloride (8E-05 mg/kg/day) was used as a surrogate value for thallium and mercuric chloride (3E-04 mg/kg/day) was used as the surrogate value for mercury. Adjusted RfDs for the dermal route for these COCs included aluminum (1.0E+00 mg/kg/day), arsenic (3E-04 mg/kg/day), barium (5E-03 mg/kg/day), chromium (7.5E-05 mg/kg/day), iron (3E-01 mg/kg/day), manganese (food and water) (2.8E-03 mg/kg/day), and vanadium (2.6E-04 mg/kg/day), thallium chloride (8E-05 mg/kg/day) was used as a surrogate value for thallium and mercuric chloride (2.8E-03 mg/kg/day) was used as the surrogate for mercury.

Three COCs have toxicity data indicating their potential for noncarcinogenic health effects via the inhalation route. Chronic animal studies indicate the aluminum impacts the central nervous system, chromium impacts the bronchioalveolar, and mercury results in autonomic dysfunction. The inhalation reference concentration for aluminum, chromium, and mercury are 5E-03 mg/m<sup>3</sup>, 1E-04 mg/m<sup>3</sup>, and 3E-04 mg/m<sup>3</sup>, respectively.

None of the COCs have toxicity data indicating their potential for carcinogenic health effects in humans via the oral, dermal, or inhalation routes.

## 7.5 Risk Characterization

The final step of the Baseline HHRA is the risk characterization. Human intakes for each exposure pathway are integrated with EPA reference toxicity values to characterize risk. Carcinogenic and noncarcinogenic effects are estimated separately. However, for the SSTS none of the COCs were carcinogens (with the exception of arsenic which was evaluated as both a carcinogen and noncarcinogen. However, only the noncarcinogenic hazard was unacceptable); therefore, only noncarcinogens will be discussed.

To characterize the overall potential for noncarcinogenic effects associated with exposure to multiple chemicals, EPA uses a hazard index (HI) approach. This approach assumes that simultaneous subthreshold chronic exposures to multiple chemicals that affect the same target organ are additive and could result in an adverse health effect. The HI is calculated as follows:

$$\text{Hazard Index} = \text{ADD}_1/\text{RfD}_1 + \text{ADD}_2/\text{RfD}_2 + \dots \text{ADD}_n/\text{RfD}_n$$

where

ADD, = Average Daily Dose (ADD) for the toxicant

RfD, = Reference Dose for the toxicant

The term  $ADD_1/RfD_1$ , is referred to as the HQ.

Calculation of an HI in excess of unity (1) indicates the potential for adverse health effects. Indices greater than one (1) will be generated any time intake for any of the COCs exceeds its RfD. However, given a sufficient number of chemicals under consideration, it is also possible to generate an HI greater than one (1) even if none of the individual chemical intakes exceeds its respective RfD.

Tables 7-3 through 7-11 present the Risk Characterization Summary for all receptors that had an HI that exceeded 1.

The hazards for the future construction worker and adult and child residents were the only receptors above the applicable threshold of a total HI greater than 1. The largest contributors for the construction worker included ingestion of iron and vanadium in surface soil; ingestion of chromium, iron, and vanadium in subsurface soil; ingestion of arsenic, barium, iron, manganese, mercury, and vanadium in groundwater.

The contributors to the HI for the adult resident included ingestion of iron in surface soil, and ingestion of aluminum, arsenic, barium, iron, manganese, mercury, and vanadium in groundwater.

The contributors to the HI for the child resident included ingestion of aluminum, chromium, iron, thallium, and vanadium in surface soil; ingestion of aluminum, arsenic, barium, iron, manganese, mercury, and vanadium in groundwater. Additionally, ingestion of mercury in potable well SS-PW-03 and zinc in potable well SS-PW-10.

## **7.6 Remedial Goal Options**

This section contains the site-specific remedial goal options (RGOs) for the chemicals and media of concern at the SSTs. In accordance with Region 4 guidance, RGOs are included in the Baseline HHRA to provide the EPA Remedial Project Manager with a range of risk-based media cleanup levels options and ARARs as a basis for developing the selected remediation goals in the FS and Proposed Plan.

RGOs were developed for the COCs in each land use scenario evaluated in the Baseline HHRA for this site.

The Risk-Based RGOs and ARARs for surface and subsurface soils and groundwater are identified in Tables 7-12 through 7-17.

## **7.7 Selection of Final Contaminants of Concern**

The selection of the final COCs for the SSTs included an evaluation of both risk-based and protection of groundwater COCs against their respective RGOs.

The risk-based COCs identified by the Baseline HHRA (Tables 7-3 through 7-11) were reviewed by the SSTs risk management team along with the ARARs, and other non-risk assessment information. Risk-based COCs found to be of minimal concern to health or the environment were eliminated from further consideration for remediation. The refinement of the COCs is summarized in Table 7-18; the rationale and conclusions of the risk management team decisions are outlined below.

## ***HHRA Refinement***

The Baseline HHRA identified five metals as COCs: aluminum, chromium, iron, thallium, and vanadium.

Although aluminum was identified as a COC for both onsite and offsite surface soil, further evaluation of both the historical and RI field investigation data revealed that the maximum concentrations found in surface soil (2,000 mg/kg and 64,000 mg/kg) were less than the child resident HI of 1, risk-based RGO of 76,865 mg/kg; therefore, aluminum was eliminated as a HHRA COC for surface soil.

Although chromium was identified as a COC for both surface and subsurface soils, further evaluation of both the historical and RI field investigation data revealed that the maximum concentrations found in surface soil were less than the child resident HI of 1, risk-based RGO of 155 mg/kg and the maximum concentrations found in subsurface soil were less than the construction worker HI of 1, risk-based RGO of 858 mg/kg. Therefore, chromium has been eliminated as a HHRA COC for surface and subsurface soil.

Although iron was identified as a COC for both surface and subsurface soils, further evaluation of both the historical and RI field investigation data revealed that with the exception of one location, the maximum concentrations found in surface soil were less than the child resident HI of 1, risk-based RGO of 22,730 mg/kg and the maximum concentrations found in subsurface soil were less than the construction worker HI of 1, risk-based RGO of 91,729 mg/kg; therefore, iron was eliminated as a COC for both surface and subsurface soils.

Thallium was originally identified as a COC for surface soil; however, maximum concentrations found in both surface soil and subsurface soil were less than the risk-based RGO of 6 mg/kg. Therefore, thallium was eliminated as a COC for surface soil and subsurface soil.

Vanadium was also identified as a COC for surface soil in the HHRA. Concentrations of vanadium were found in both onsite and off-site surface soils above the child resident HI of 1, risk-based RGO of 73 mg/kg; therefore, vanadium has been retained as a direct contact COC for surface soil.

The Risk-Based RGOs and ARARs for Surface and Subsurface Soils are identified in Table 7-19.

## ***Groundwater Protection Refinement***

In addition to the previous human health risk-based discussions, the leachability criteria for groundwater COCs present in soils were also evaluated. The general approach for determining screening criteria to evaluate the potential for soil-to-groundwater leaching has been discussed in Section 5. The soil screening standards based on soil-to-groundwater leaching for the groundwater COCs were identified in Section 6.2.7 in the OU1 RI report. The criteria evaluated and selected are presented in Table 7-20 and discussed below:

- EPA Region 9 PRGs - A site-specific dilution attenuation factor (DAF = 3) was determined in the OU1 RI. The screening criteria based on the site-specific DAF was determined via linear interpolation between the criteria presented for DAF = 1 and DAF = 20.
- Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater.

- Leachability criteria provided by the State of North Carolina or calculated by Black & Veatch.

Where criteria from two or more of these sources were available, the most conservative value was selected. Comparison of these standards to the data presented in Section 4 resulted in the following general conclusions:

- **Aluminum:** The leachability screening concentration of 72,010 mg/kg was not exceeded by any of the surface soil samples, and in only one of the subsurface soil samples. Therefore, aluminum has been eliminated as a groundwater protection COC.
- **Arsenic:** For protection of groundwater and as stated in Section 6.2.8 of the HHRA in the OU1 RI Report, arsenic was found in only a few of the surface and subsurface soil samples at concentrations exceeding the EPA leachability standard for protection of groundwater value of 4.0 mg/kg which was calculated using default parameters. However, arsenic was not found in any of the groundwater samples at levels exceeding the MCL of 10 µg/L except for one groundwater sample collected in October of 2002 from SS-MW-11C at a concentration of 26 µg/L. Therefore, arsenic has been eliminated as a groundwater protection COC.
- **Barium:** Barium was not detected in groundwater above the MCL of 2,000 µg/L even though as stated in Section 6.2.8 of the HHRA in the OU1 RI Report, barium was found in eight surface soil locations and several deep boring locations in the lagoon exceeding the NC leachability standard for protection of groundwater of 241.8 mg/kg which was calculated using default parameters. Therefore, barium has been eliminated as a groundwater protection COC for surface and subsurface soil.
- **Lead:** Based on the HHRA, lead was not identified as a COC for surface soil, subsurface soil, or groundwater. Although lead was detected in many of the soil samples across the site, the concentration of lead exceeded the groundwater protection value of 270 mg/kg only at SB-06 at a depth of 5-7 feet. Furthermore, low concentrations of lead generally less than 5 µg/L were found in the majority of wells; however, the only exceedences of the MCL (15 µg/L) were found at potable wells PW-09 and PW-10 and monitoring well MW-14. Both wells PW-09 and PW-10 are located upgradient of the site. At well PW-09, lead was detected at 50 µg/L, 14A µg/L, 20J µg/L and 4.3J µg/L. At well PW-10, lead was detected at a concentration of 140J µg/L and 11J µg/L. Lead was detected at a concentration of 16 µg/L in well MW-14, but this may be falsely high due to the high turbidity (380 NTUs) of the sample. Based on subsequent risk management discussions with EPA and the State of North Carolina, the determination was made not to include lead as a groundwater protection COC.
- **Manganese:** Although manganese was identified as a COC for groundwater in Section 6.2.7 of the HHRA in the OU1 RI Report, further evaluation of both the historical and RI field investigation data revealed that manganese exceeded the EPA's health advisory value of 300 µg/L in three of the site monitoring wells MW-11C, MW-13B, and MW-14 and five of the push point/temporary wells (PP-5, PP-7, PP-8, TW-3, and TW-9). The concentration of manganese found in the three monitoring wells ranged from 5,200 to 19,000 µg/L. The wells are all located in the southwestern area of the site. These results indicate the potential of a manganese plume originating in the southern

portion of the site. Groundwater in this area generally flows to the south and southwest. The septic pits were located in the southern portion of the site. Using the EPA health advisory value of 300 µg/L, a leachability standard for protection of groundwater of 391 mg/kg was calculated. The subsurface soil samples that exceeded this standard were found in the southern portion of the site at concentrations ranging from 430 mg/kg to 1,300 mg/kg. The orientation and concentration of these subsurface soil samples suggest the possibility that the high level of manganese observed in the wells may be site related. It is also possible that the naturally occurring oxidation/reduction of chlorinated solvents located in the center of the southern portion of the site resulted in the mobilization of manganese in this area. EPA and the State of North Carolina determined that manganese will not be a groundwater protection COC; however, the concentration of manganese in the groundwater will be monitored over time.

- **Mercury:** Based on the HHRA, mercury was not identified as a COC for either surface or subsurface soil, but was preliminarily identified as a groundwater COC based on a NC leachability standard of 0.015 mg/kg. Although mercury was detected in many of the subsurface soil samples in the southern half of the property above this groundwater protection number of 0.015 mg/kg with a maximum concentration of 1.6 mg/kg at SB-06 at a depth of 5-7 ft, mercury was only detected in two wells, potable well PW-03 and monitoring well MW-14. The federal MCL (2 µg/L) as well as the North Carolina MCL (1.1 µg/L) were exceeded only at PW-03 (2.1 µg/L) during the 2002 sampling event but the mercury concentration at this well decreased to 0.98 µg/L in 2004 and 0.2 µg/L in 2005. Mercury was also found in well MW-14 at a concentration of 44J µg/L in 2004 but this result may be falsely high due to the high turbidity (380 NTUs) of the sample. Based on this data, EPA and the State of North Carolina decided to eliminate mercury as a groundwater protection COC.
- **Vanadium:** The EPA calculated teachability screening concentration of 900 mg/kg was not exceeded in any of the surface or subsurface samples. Based on this data, EPA and the State of North Carolina decided to eliminate vanadium as a groundwater protection COC.
- **Zinc:** Based on the HHRA, zinc was originally identified as a COC for groundwater based on an EPA protection of groundwater teachability standard of 1817.8 mg/kg; maximum concentrations found in surface soil were below this standard and just barely above this standard in a few locations in subsurface soil. Based on the fact that zinc was not found above the MCL of 5,000 µg/L in any of the wells, zinc was eliminated as a groundwater protection COC.

## **7.8 Performance Standards**

Based on an evaluation of both the historical and RI field investigation data, and the previous discussions regarding both risk-based and protection of groundwater RGOs, (as presented in Table 7-18) EPA and the State of North Carolina have concluded that based on a human health risk to a child, vanadium in both onsite and offsite surface soils at the SSTS is the only remaining COC requiring remediation at the site.

The establishment of health-based performance standards serves as an important means of guiding remedial activities. A health-based approach is utilized when performance standards promulgated by state and federal agencies are not available. The approach to developing health-based standards is derived from the risk assessment process. The risk assessment is essentially a process by which the magnitude of potential cancer

risks and other health effects at a site can be evaluated quantitatively. A performance standard is established by back-calculating a health protective contaminant concentration given exposure assumptions and a target cancer risk or a hazard index which are acceptable and realistic. The concept of the performance standard inherently incorporates the concept of exposure reduction which allows remedial alternatives to be flexible. Therefore, the performance standard for both onsite and offsite surface soil at the SSTS is for vanadium at 73 mg/kg.

## **7.9 Uncertainty Analysis**

The uncertainty analysis provides decision-makers with a summary of those factors that significantly influence risk results and discusses the underlying assumptions that most significantly influence risk. This section discusses the assumptions that may contribute to over- or underestimates of risk.

### **7.9.1 Uncertainties Related to Exposure Assessment**

The exposure scenarios contribute a considerable degree of uncertainty to risk assessment. Actual exposure frequencies are unknown; estimates were based on available guidance. Actual exposure is not expected to exceed the values presented, but may be lower. The use of conservative assumptions in the exposure assessment is believed to result in a potential overestimate of risk. Actual site risk may be lower than the estimates presented here, but is not likely to be greater.

Not all potential receptors were examined. For example, surface and subsurface soil contamination exists in the area immediately north of the site. Excavations in this area by a construction worker could result in exposure to contaminated soil. Although this scenario was not examined, contamination in the subsurface was not ignored. The FS report (May 2006) evaluates the contamination in this area as a protection of groundwater issue. The resultant proposed cleanup levels are considerably lower (more protective) than would be generated had a construction worker scenario been considered.

### **7.9.2 Uncertainties Related to Toxicity Information**

RfDs and cancer slope factors (CSF) for COCs were derived from EPA sources. RfDs are determined with varying degrees of uncertainty, depending on such factors as the basis for the risk [no-observed-adverse-effect-level (NOAEL)], versus lowest-observed-adverse-effect-level (LOAEL), species (animal or human), and professional judgment. The calculated risk is, therefore, likely overly protective; and its use may result in an overestimation of noncancer risk. Similarly, the CSFs developed by EPA are generally conservative and represent the upper-bound limit of the carcinogenic potency of each chemical.

### **7.9.3 Uncertainties Related to Groundwater Data**

The groundwater data that were used in this assessment contribute a significant degree of uncertainty to the overall assessment. Among the factors that should be considered is the use of a single sampling event to estimate risk in the future. The presumption that contaminant concentrations will remain the same over time may overestimate the potential risk, because dispersion and other natural processes are not accounted for.

#### **7.9.4 Uncertainties Related to Incomplete Site Characterization**

The site is in a fractured bedrock environment, which means that groundwater flow patterns are difficult to predict. Consequently, defining the extent of groundwater contamination in the conventional sense is a major challenge. Investigations that have been conducted since the early 1990s have shown that the wells onsite are highly contaminated, while seven private wells near the site are also impacted, but to a lesser degree. To date, no other private wells have been shown to be significantly impacted. However, since the area is not served by a public water system, regular monitoring of potentially impacted private wells is a prudent course for the foreseeable future.

#### **7.10 Ecological Risk Assessment**

EPA evaluated the potential for ecological risks at the SSTs. Ecological risk assessment addressed the objectives set forth by the National Contingency Plan, 40 Code of Federal Regulations 300, under CERCLA for protection of the environment from current and potential threats posed by an uncontrolled hazardous substance release.

On July 1, 2002, EPA completed a "Final" Screening-Level Ecological Risk Assessment (SLERA). The SLERA was based on data collected during the ESI conducted at the SSTs. The EPA collected additional data as part of the RI sampling investigation in October 2002. The additional data was evaluated to determine its impacts on the conclusions of the July 2002 SLERA. There were contaminants exceeding the concentrations reported in the July 1, 2002 SLERA that would have affected the outcome of the SLERA. These included beryllium and thallium in surface soil. In addition, contaminants detected in the October 2002 RI sampling event but not analyzed for in the July 1, 2002 SLERA include 4,4'-DDD and alpha-Chlordane in sediments; PCB-1260 in surface water; and numerous pesticides/PCBs and dioxins in surface soil. This analytical data can be found in Appendix B, Tables 5-1 through 5-13. Based on a technical review of the SLERA performed for the site and other pertinent information available at the time, it was concluded that ecological risk would not require further evaluation.

## 8.0 Remedial Action Objectives

CERCLA and the NCP define remedial action objectives (RAOs) that are applicable to all Superfund sites. They relate to the statutory requirements for the development of remedial actions. Site-specific RGOs (described in Table 7-18) relate to potential exposure routes and specific contaminated media, such as soil, and are used to identify target areas of remediation and contaminant concentrations. They require an understanding of the contaminants in their respective media and are based upon the evaluation of risk to human health and the environment, protection of groundwater, information gathered during the RI, applicable guidance documents, and federal and state ARARs. RAOs are as specific as possible without unduly limiting the range of alternatives that can be developed for detailed evaluation.

In consideration of the COCs and RGOs, RAOs for the SSTS OU1 (i.e., contaminated soils, sediment, and surface water) include the following:

- Eliminate future migration of COCs in excess of the RGOs from soil to groundwater and surface water.
- Eliminate or reduce future migration of surface soil COCs in excess of the RGOs to other surface media (surface water or sediment).
- Protect health of human receptors near the site. Specifically, the proposed action would:
  - prevent exposure to contaminated groundwater in excess of the RGOs,
  - reduce migration of the contaminant plume,
  - reduce migration of contaminants in excess of the RGOs from sources,
  - provide additional site data to assess restoration potential, and
  - Prevent direct exposure to contaminated surface and subsurface soils and sediments in excess of the RGOs.

## 9.0 Description of Alternatives

Many technologies were considered to clean up the Site. Appropriate technologies were identified and screened for applicability to site conditions in an FS (soil). The potential technologies were then assembled into alternatives in the FS. Potential remedial alternatives of the Site were identified, screened, and evaluated in the FS. The range of alternatives developed included no action, institutional controls, containment, treatment, and disposal. The alternative numbers used in the FS identify the alternatives. A Summary of Soil Alternatives Evaluation can be found in Table 9-1 and the costs can be found in Table 12-1.

### 9.1 Description of Soil Alternatives

#### 9.1.1 Soil Alternatives

##### **Alternative S1: NO ACTION**

Regulations governing the Superfund program generally require that the "no action" alternative be evaluated generally to establish a baseline for comparison. Under this alternative, EPA would take no action at the Site to prevent exposure to the soil contamination. Since hazardous wastes would remain on-site, this alternative would require continued monitoring of the soil and periodic 5-Year Reviews.

|                                                   |          |
|---------------------------------------------------|----------|
| Estimated Capital Cost:                           | \$0      |
| Estimated Total O&M Present Worth Cost:           | \$0      |
| Estimated Total 5-Year Review Present Worth Cost: | \$78,424 |
| Estimated Present Worth Cost:                     | \$78,424 |
| Estimated Construction Time Frame:                | None     |

##### **Alternative S2: REMOVAL/TREATMENT: EXCAVATE, CHEMICALLY STABILIZE HIGHLY CONTAMINATED SOIL, AND DISPOSE OF THE CONTAMINATED SOIL ONSITE**

This alternative consists of the excavation of all soils above site cleanup goals, consolidation and treatment of excavated soils that fail TCLP using solidification/stabilization pursuant to applicable treatment standards under 40 CFR 268, and onsite disposal. It is assumed that 25 percent of the total contaminated soil volume is highly contaminated and will require solidification/stabilization treatment prior to onsite land disposal. Solidification/stabilization treatment includes thoroughly mixing a chemical reagent or chemical mixture into the contaminated soil to initiate a chemical reaction that (a) chemically or physically alters the contaminant(s) into a less mobile form or (b) solidifies the soil-chemical mass into an inert matrix. The treated and untreated soil would be disposed into an appropriate onsite disposal area meeting requirements for RCRA Subtitle D non-hazardous waste disposal. The onsite disposal area will be capped with a 1 foot soil layer and grass cover.

Institutional controls such as fencing and deed restrictions may be implemented for the onsite disposal area. The soil and vegetative cap will be maintained throughout the life of the remedy.

|                                                   |             |
|---------------------------------------------------|-------------|
| Estimated Capital Cost:                           | \$1,749,556 |
| Estimated Total O&M Present Worth Cost:           | \$186,136   |
| Estimated Total 5-Year Review Present Worth Cost: | \$81,900    |
| Estimated Present Worth Cost:                     | \$2,017,592 |
| Estimated Construction Time Frame:                | 1 year      |

**Alternative S3: EXCAVATION, CHEMICALLY STABILIZE HIGHLY CONTAMINATED SOIL, AND OFFSITE TRANSPORTATION AND DISPOSAL AT A SUBTITLE D LANDFILL**

The major components of this alternative include:

- Excavation of surface and subsurface soil containing COCs above site-specific remedial goal concentrations,
- Treatment to meet applicable treatment standards under 40 CFR 268 using solidification/stabilization of soils that fail TCLP,
- Offsite transportation and disposal of the treated and untreated soil at an offsite RCRA Subtitle D Landfill,
- Backfill the excavated areas with clean borrow material obtained from a local source, and
- Re-vegetate and restore site to safe and usable conditions.

This alternative is similar to Alternative S2 except that the treated and untreated soil will be disposed at an offsite RCRA secured Subtitle D landfill meeting the requirements for RCRA Subtitle D non-hazardous waste disposal. It is assumed that 25 percent of the soil is highly contaminated and require solidification/stabilization treatment prior to disposal. This alternative will remove all soil exceeding the site-specific cleanup goals from the Site and adjacent properties. The excavated areas will be backfilled with clean soil and re-vegetated.

Deed restrictions may be placed on the Site while the remedial action takes place. Water would be used to minimize fugitive dust emissions during soil excavation, transport and handling. The re-vegetated areas will be monitored and maintained on a quarterly basis for the first 3 years to ensure survival of the vegetation.

|                                                   |             |
|---------------------------------------------------|-------------|
| Estimated Capital Cost:                           | \$2,163,251 |
| Estimated Total O&M Present Worth Cost:           | \$26,243    |
| Estimated Total 5-Year Review Present Worth Cost: | \$0         |
| Estimated Present Worth Cost:                     | \$2,189,494 |
| Estimated Construction Time Frame:                | 1 year      |

## 10.0 Comparative Analysis of Alternatives

This section presents a comparative analysis of the soil alternatives based on the threshold and balancing evaluation criteria. The objective of this section is to compare and contrast the alternatives so that decision makers may select a preferred alternative for presentation in the ROD.

The alternatives are presented here to give decision makers a range of potential actions that could be taken to remediate this site.

For soil/sediment, these actions include:

- No action,
- Excavation, on-site treatment with solidification/stabilization, and on-site disposal of treated waste, and
- Excavation, on-site treatment with solidification/stabilization, and off-site disposal of treated waste.

Table 10-1 presents a summary of each soil remedial alternative along with ranking scores for each evaluation criterion. Each alternative's performance against the criteria (except for present worth) was ranked on a scale of 0 to 5, with 0 indicating that none of the criterion's requirements were met and 5 indicating all of the requirements were met. The ranking scores are not intended to be quantitative or additive, but rather are only summary indicators of each alternative's performance against the CERCLA evaluation criteria. The ranking scores combined with the present worth costs provide the basis for comparison among alternatives.

Alternatives 2 and 3 ranks higher than Alternative 1 in overall protection of human health and the environment, compliance with Applicable or Relevant and Appropriate Requirements (ARARs), long-term effectiveness and permanence, and reduction of M/T/V. Alternative 3 ranks slightly higher than Alternative 2 in compliance with ARARs, long-term effectiveness, and permanence, and implementability. Alternative 2 ranks slightly higher than Alternative 3 in short-term effectiveness.

## **11.0 Principal Threat Waste**

The NCP establishes an expectation that EPA will use treatment to address principal threats (source) posed by a site wherever practical. A principal threat concept is applied to the characterization of "source material" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, surface water, or air, or acts as a source for direct exposure. EPA has defined principal threat wastes as those source materials considered to be highly toxic or highly mobile, and generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis, through a detailed analysis of alternatives, using the remedy selection criteria described in Section 9. This analysis provides a basis for making a statutory finding that the selected remedy employs treatment as a principal element. The contaminated soils above the RGs and which also fail TCLP across the site are considered to be a "principle threat wastes" because the COCs are found at concentrations that pose significant risk to human health. The principal threat wastes above RGOs and which fail TCLP will be excavated, treated pursuant to RCRA treatment standard requirements at 40 CFR 268 through solidification/stabilization prior to off-site land disposal.

## **12.0 The Selected Remedy**

The selected remedy meets the requirements of the two mandatory threshold criteria: protection of human health and the environment and compliance with ARARs while providing the best balance of benefits and tradeoffs among the five balancing criteria: long-term effectiveness and permanence, short-term effectiveness, implementability, reduction of mobility/toxicity/volume (M/T/V) through treatment, and cost. The selected remedy also includes flexibility, to the maximum extent practical, to allow for future redevelopment of the Site. Input from the State of North Carolina, local municipalities, and the community were critical components that were considered. During discussions between EPA and the local community regarding the selected remedy, a request was made by the community to excavate and remove the contaminated soils located beneath the stockpile if the additional costs were not considered excessive. After further review, EPA determined that this request by the community was reasonable and the additional costs were minimal. The selected remedy meets the RAOs presented in Section 8 and is described below:

### **12.1 Alternative S3: Excavation, Chemically Stabilize Highly Contaminated Soil and Off site Transportation and Disposal at a Subtitle D Landfill**

Contaminated soils would be excavated, transported to a central area onsite for consolidation, solidification/stabilization treatment (as necessary), and staging. The treated and untreated contaminated soil would then be transported and disposed at a Subtitle D landfill. The Site will be backfilled with clean borrow material from a local source, and then the Site will be revegetated and restored to safe and usable conditions.

Based on the information available at this time, EPA and the NCDENR believe the Preferred Alternative would be protective of human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions. The Preferred Alternative can change in response to public comment or new information.

### **12.2 Summary of Estimated Remedy Cost for Soils**

The total present worth for soil Alternative 3 is \$2,189,494. The estimated capital costs are \$2,163,251 and the estimated total operation and maintenance (O&M) present worth is \$26,243.

## **13.0 Statutory Determinations**

Under CERCLA #121 and the NCP, the lead agency must select remedies that are yy protective of human health and the environment, comply with ARARs (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions to the extent W practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduces the M/T/V of hazardous wastes as a u principal element. The following sections discuss how the selected remedy meets these statutory requirements.

### **13.1 Protection of Human Health and the Environment**

The selected remedy will protect human health and the environment by:

- Preventing unacceptable exposure risk to current and future human populations presented by direct contact, inhalation, or ingestion of contaminated soil.
- Preventing unacceptable exposure risks to current and future ecological receptors presented by contact, ingestion, inhalation from contaminated materials, or COCs derived from the source area.
- Eliminating sources from leaching to groundwater.
- Restoring the site to a safe and useable condition.

### **13.2 Compliance with Applicable or Relevant and Appropriate Requirements**

The selected remedy will comply with federal and state ARARs that have been identified. No waiver of any ARAR is being sought for the selected remedy. State ARARs apply only when they are more stringent than the corresponding federal ARAR, or where requirements from the state program have been federally authorized. The ARARs for the remedy are identified in Tables 13-1 to 13-3.

## 14.0 References

- Black & Veatch, 2006. Black & Veatch Special Projects Corp. *Final Feasibility Study Report, Sigmon 's Septic Tank Site, Iredell County, North Carolina, May.*
- Black & Veatch, 2006. Black & Veatch Special Projects Corp. *Final Baseline Risk Assessment for Human Health, Sigmon's Septic Tank Site, Iredell County, North Carolina, June.*
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- U.S. Environmental Protection Agency (EPA), 2006, *Remedial Investigation/Feasibility Study, Sigmon's Septic Tank Site, Iredell County, North Carolina, March 14.*
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- Black & Veatch, 2002a. Black & Veatch Special Projects Corp. *Revised Final Sampling and Analysis Plan, Volume 1- Quality Assurance Project Plan Remedial Investigation, Volume 2- Field Sampling Plan Remedial Investigation, Sigmon's Septic Site, July 19, 2002.*
- Black & Veatch, 2002b. Black & Veatch Special Projects Corp. *Revised Final Work Plan, Volume 1 - Technical Approach, Volume 2 - Confidential Business Information, Sigmon's Septic Site, July 19, 2002.*
- Steiner, Bill, 2002. Technical memorandum to Beverly Hudson. Review of the Eco Risk Analysis (Steps 1 and 2) for the Sigmon's Septic Tank Site in Statesville, North Carolina.
- Black & Veatch, 2004. Black & Veatch Special Projects Corp. Email communication from Nile Testerman (NCDENR Project Manager) to Chris Allen; dated June 24, 2004.
- North Carolina Department of Environment and Natural Resources (NCDENR), 2006. Background Soil Study (data tables). Mooresville Regional Office, North Carolina Groundwater Section, Data provided electronically by Nile Testerman (NCDENR Project Manager) on January 19, 2006.
- Black & Veatch, 2006a. Black & Veatch Special Projects Corp. Remedial Investigation Report Operable Unit 1 for Sigmon's Septic Tank Site - Revision 1. Prepared for the U.S. Environmental Protection Agency, Region 4; March 2006.

# **APPENDIX A**

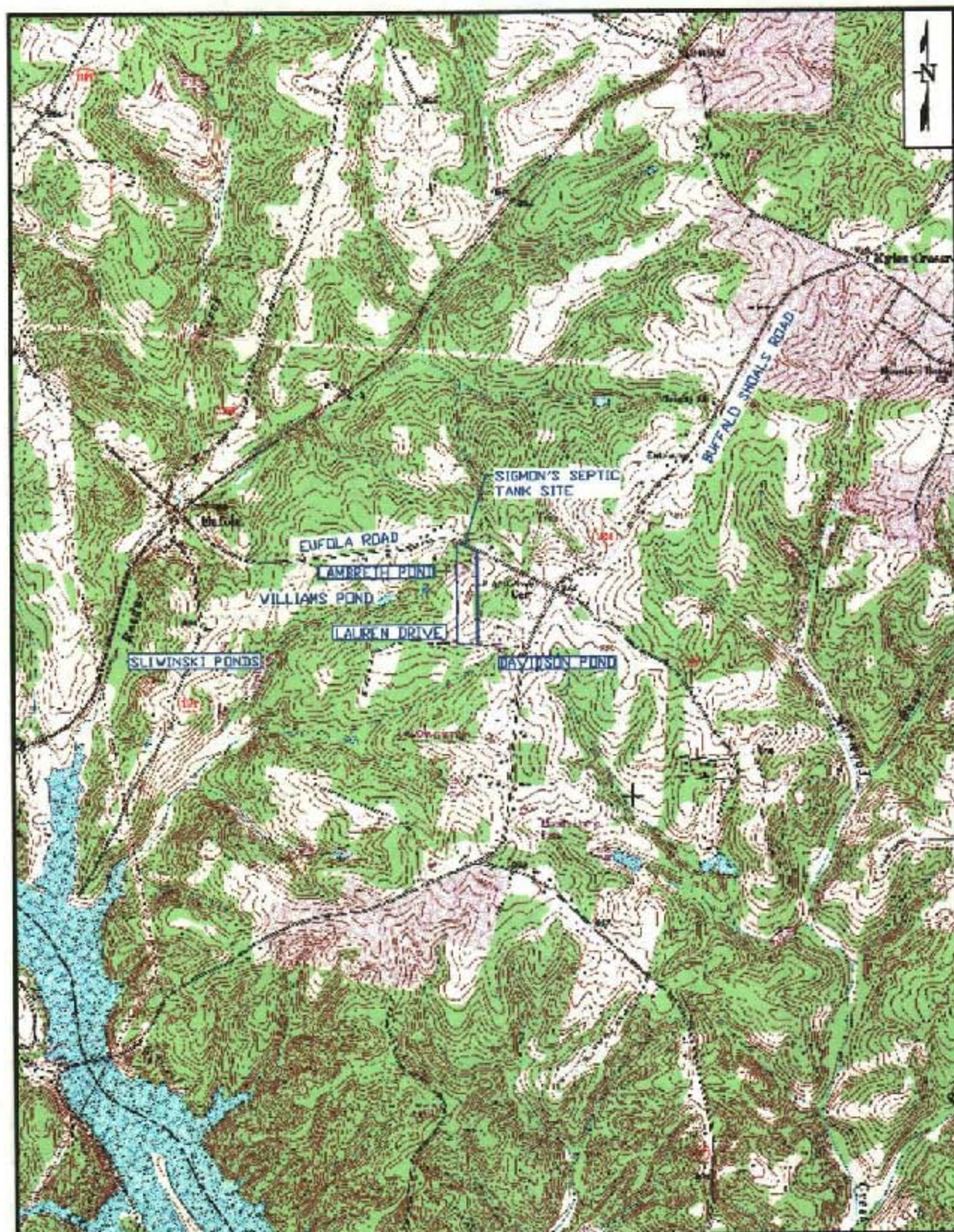
## **Figures**



**SIGMON'S SEPTIC TANK SITE  
STATESVILLE, IREDELL COUNTY, NORTH CAROLINA**

### SITE VICINITY MAP

**Figure 2-1**



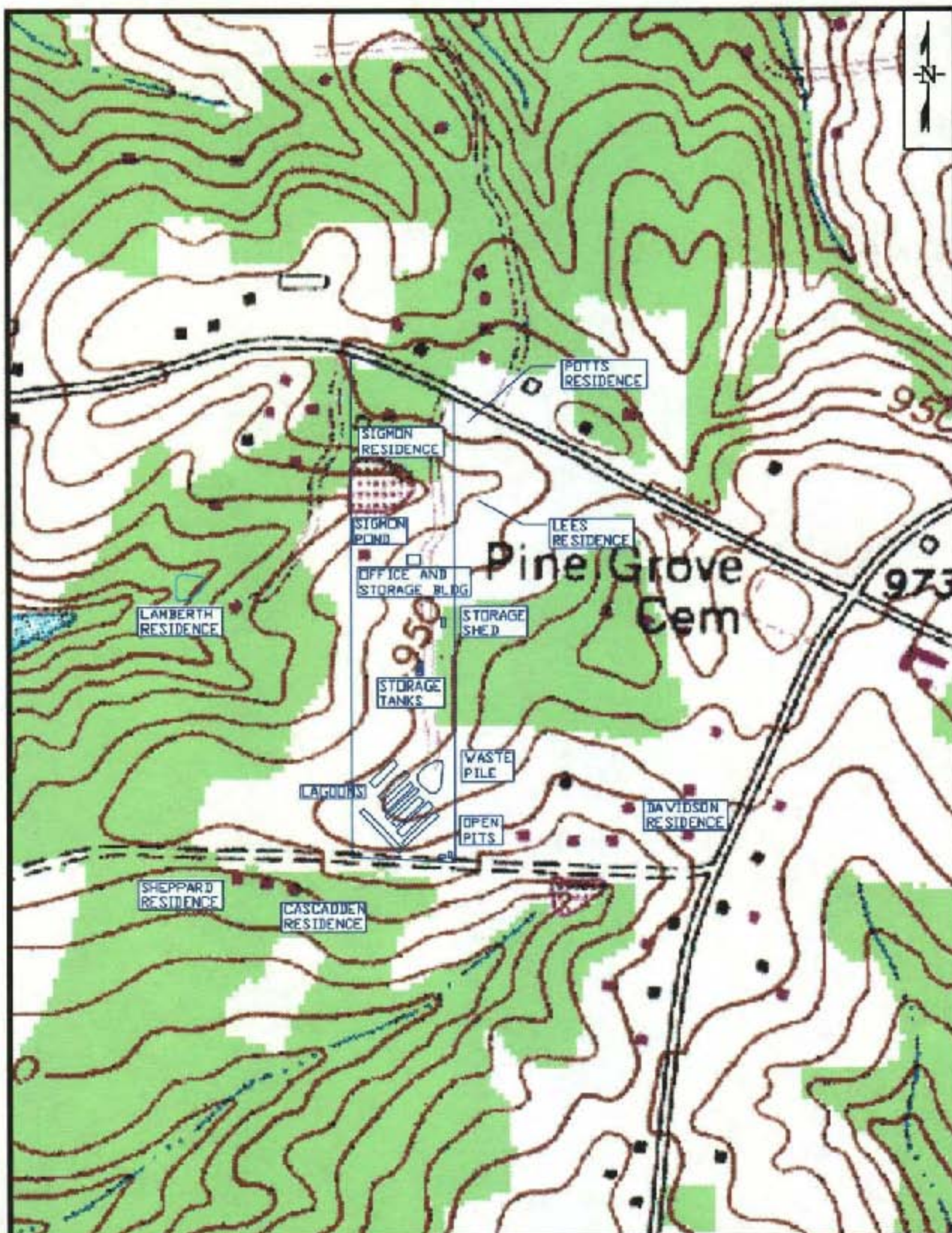
REFS. - USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP; TROUTMAN, NC 1993.

1" = 3,000'



SITE LOCATION MAP  
SIGMON'S SEPTIC TANK SITE  
STATESVILLE, IREDELL COUNTY, NORTH CAROLINA

FIGURE  
2-2



REFS. - USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP; TROUTMAN, NC 1983.

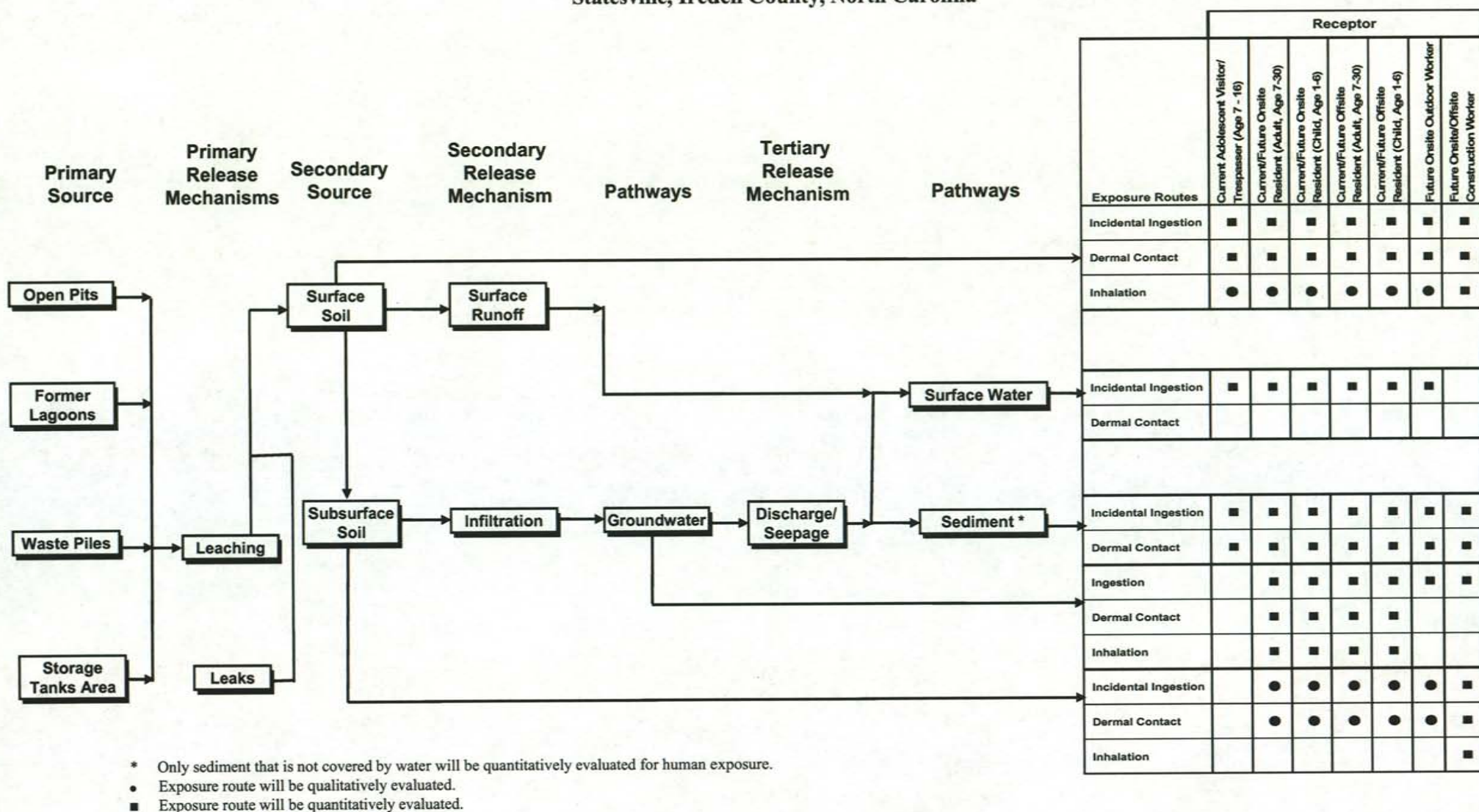
1" = 3,000'

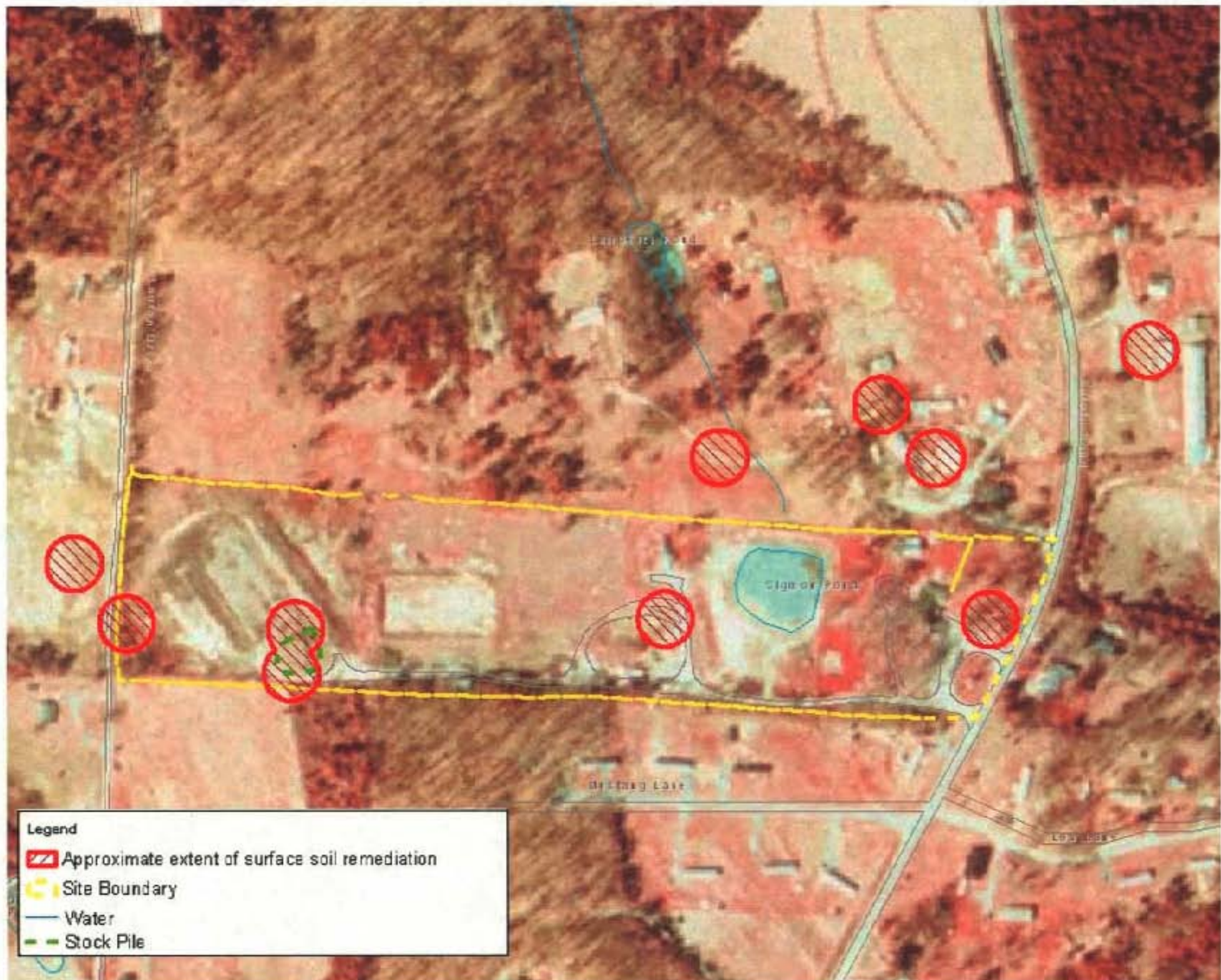


SITE LAYOUT MAP  
SIGMON'S SEPTIC TANK SITE  
STATESVILLE, IREDELL COUNTY, NORTH CAROLINA

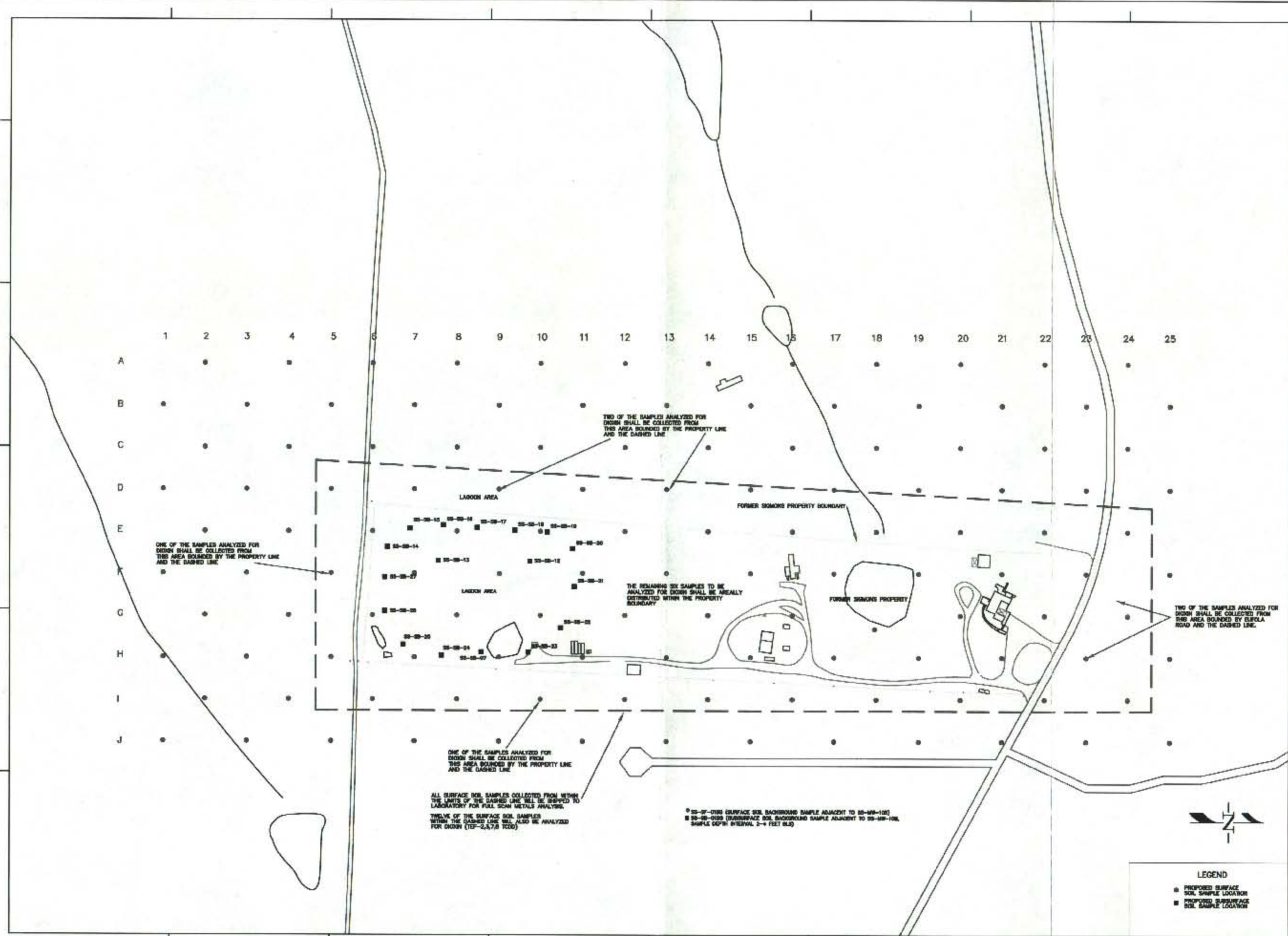
FIGURE  
2-3

**Figure 5-1**  
**Conceptual Site Model**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**





**Figure 5-2**  
**Photograph of the Sigmon's Septic Tank Site**



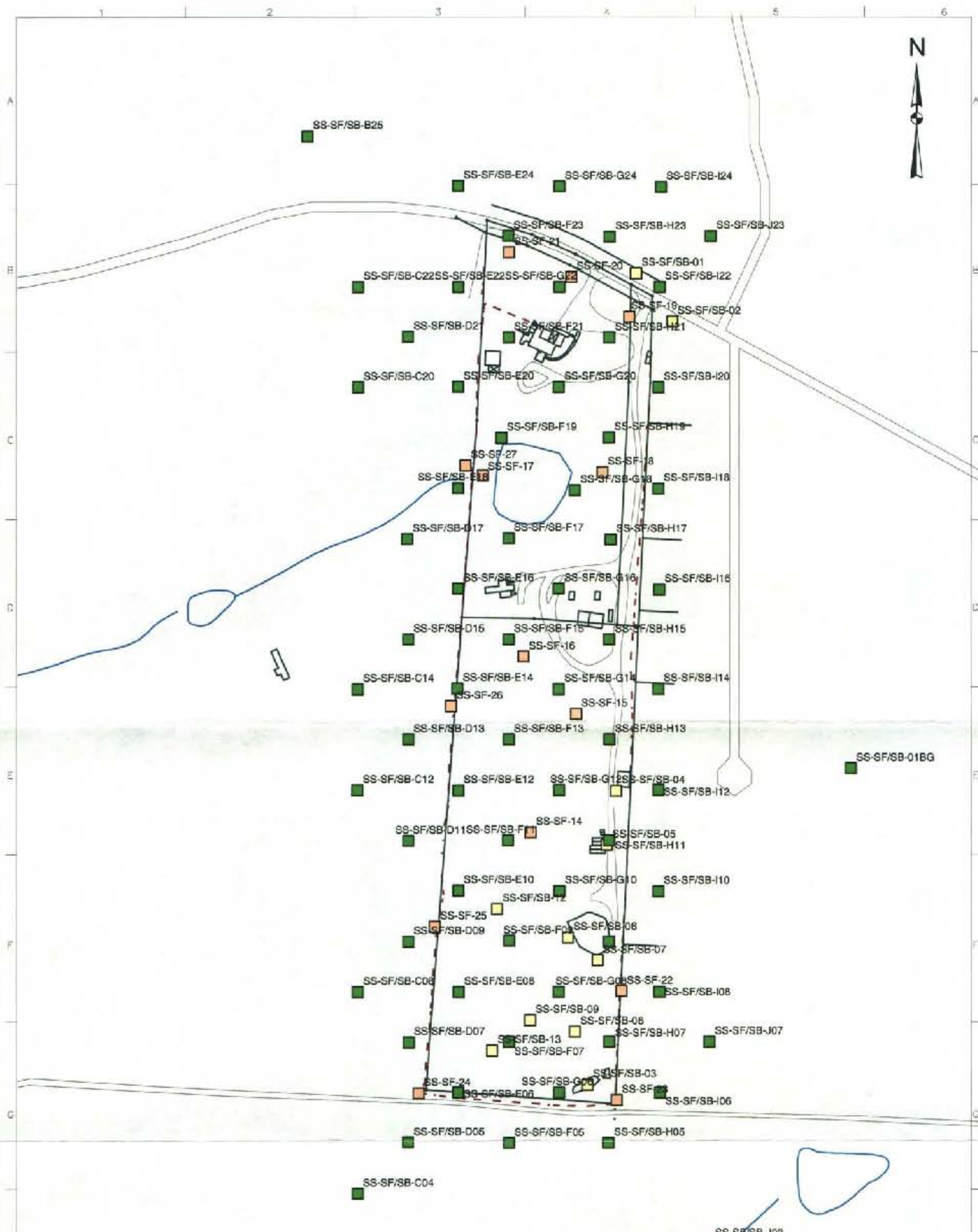
PROPOSED SURFACE AND SUBSURFACE  
SOIL SAMPLE LOCATIONS

SIMON'S SEPTIC TANK SITE  
STATESVILLE, REDELL COUNTY, NORTH CAROLINA



SCALE  
1" = 100'

Figure  
5-3

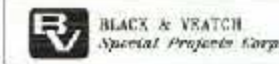


**Legend**

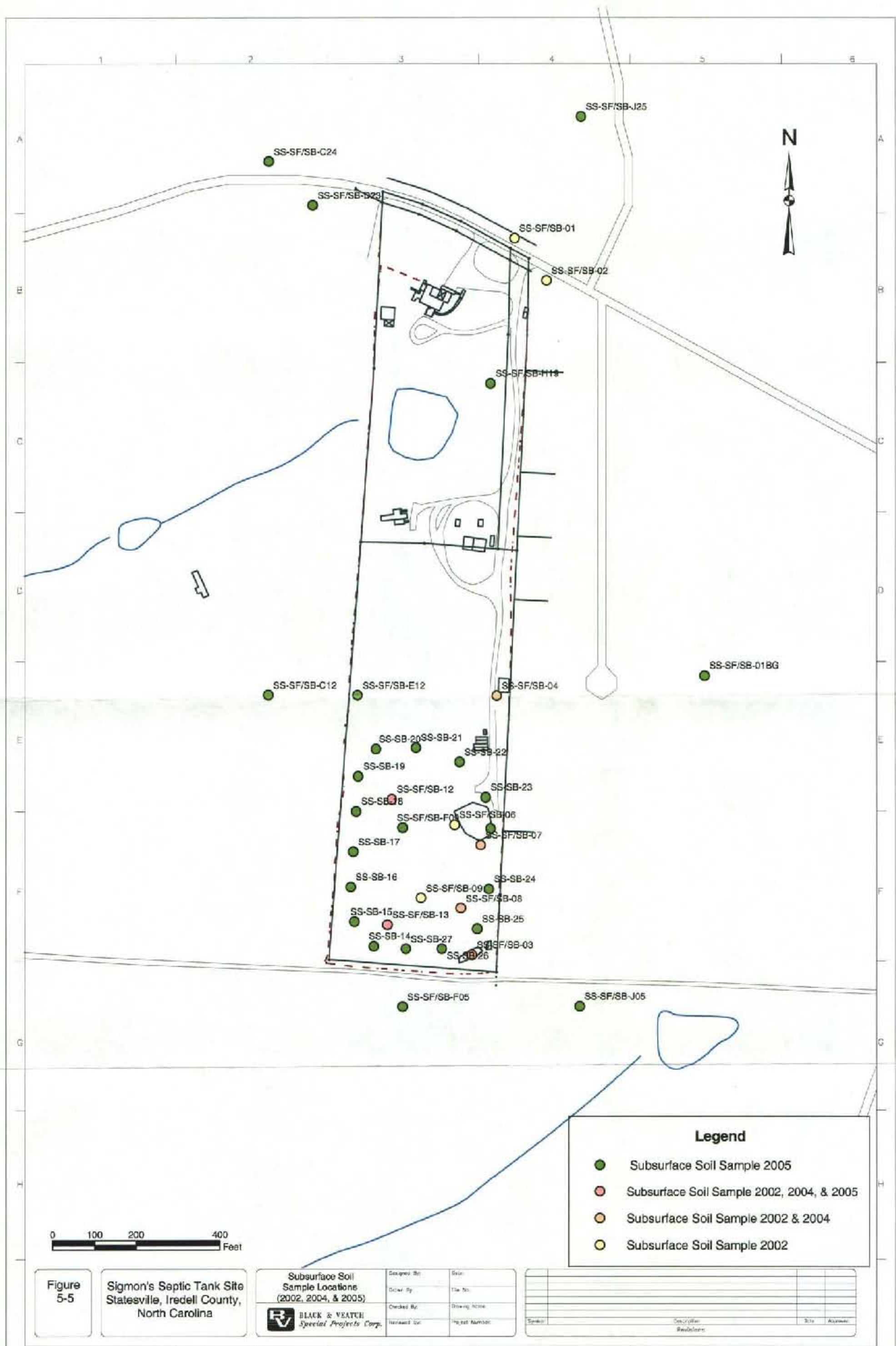
- Surface Soil Sample 2004
- Surface Soil Sample 2005
- Surface Soil Sample 2002

**Figure 5-4**  
**Sigmon's Septic Tank Site**  
 Statesville, Iredell County,  
 North Carolina

|                                                    |  |             |                |
|----------------------------------------------------|--|-------------|----------------|
| Surface Soil Sample Locations (2002, 2004, & 2005) |  | Designed By | Revised By     |
|                                                    |  | Drawn By    | File No.       |
|                                                    |  | Checked By  | Drawing Number |
|                                                    |  | Reviewed By | Project Number |



| Symbol | Description | Date | Approved |
|--------|-------------|------|----------|
|        |             |      |          |
|        |             |      |          |
|        |             |      |          |



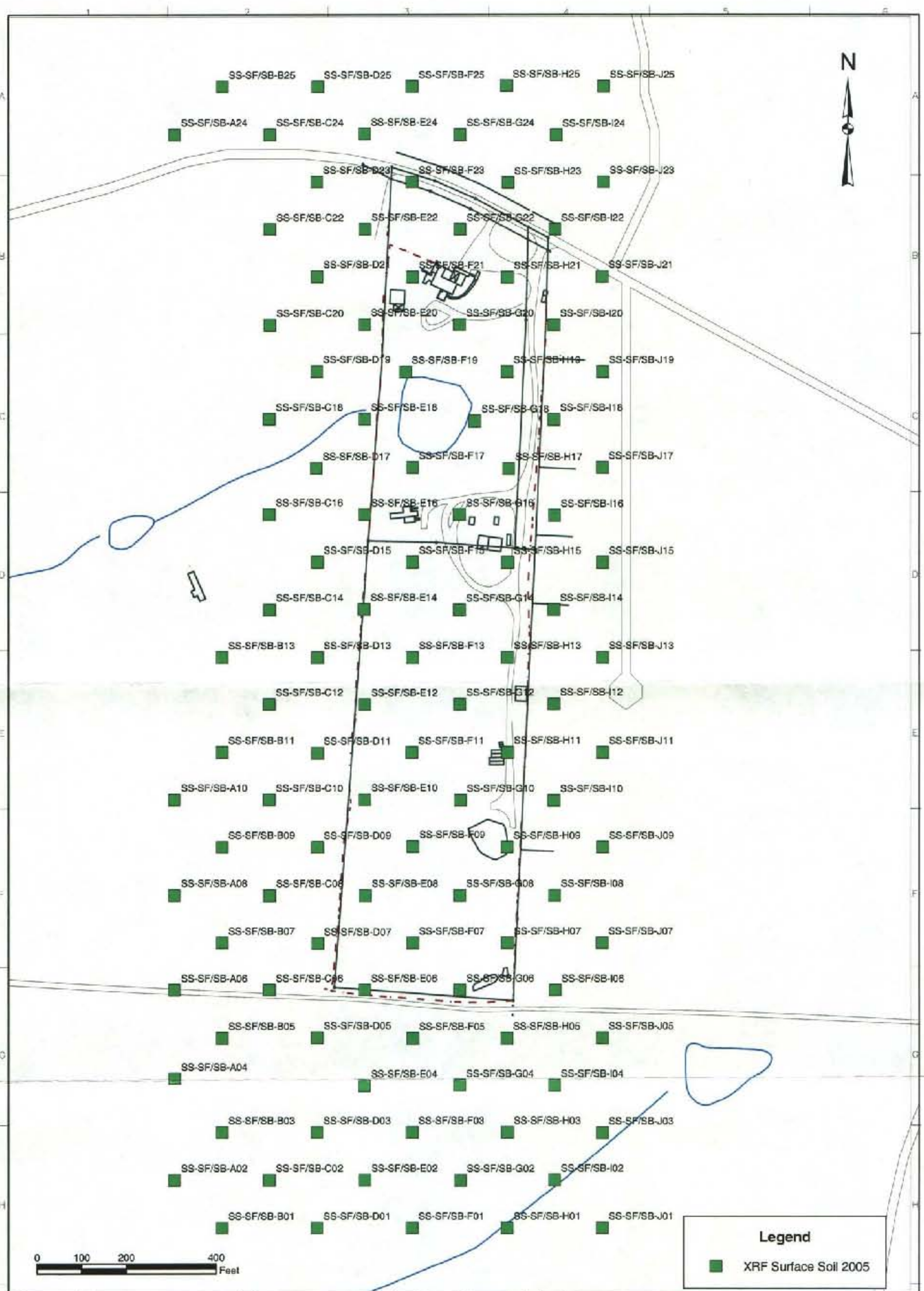


Figure 5-6

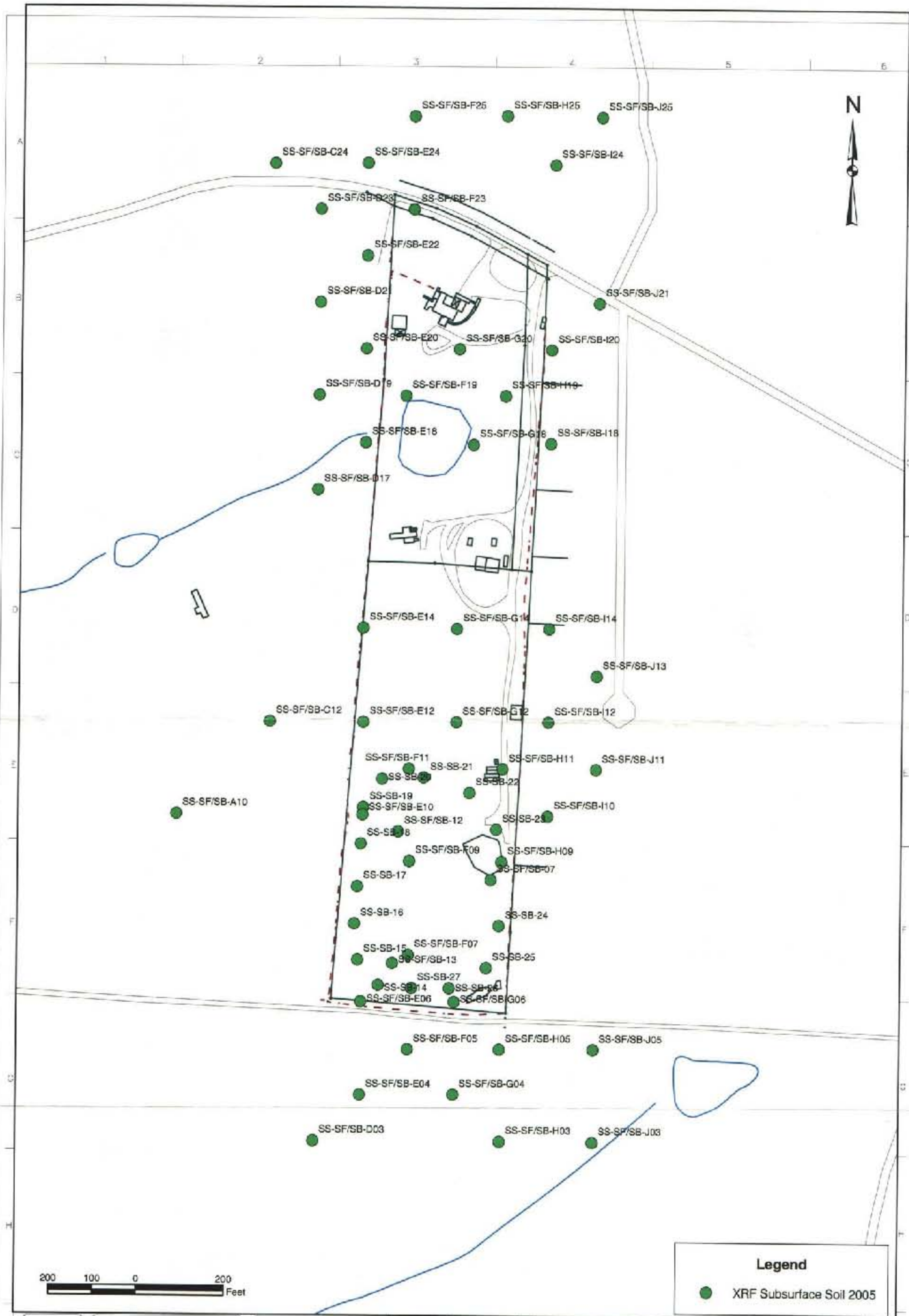
Sigmon's Septic Tank Site  
Statesville, Iredell County,  
North Carolina

XRF Surface Soil  
Sample Locations 2005

BLACK & VEATCH  
Special Projects Corp.

|              |                 |
|--------------|-----------------|
| Designed By: | Date:           |
| Drawn By:    | File No.:       |
| Checked By:  | Drawing Name:   |
| Approved By: | Project Number: |

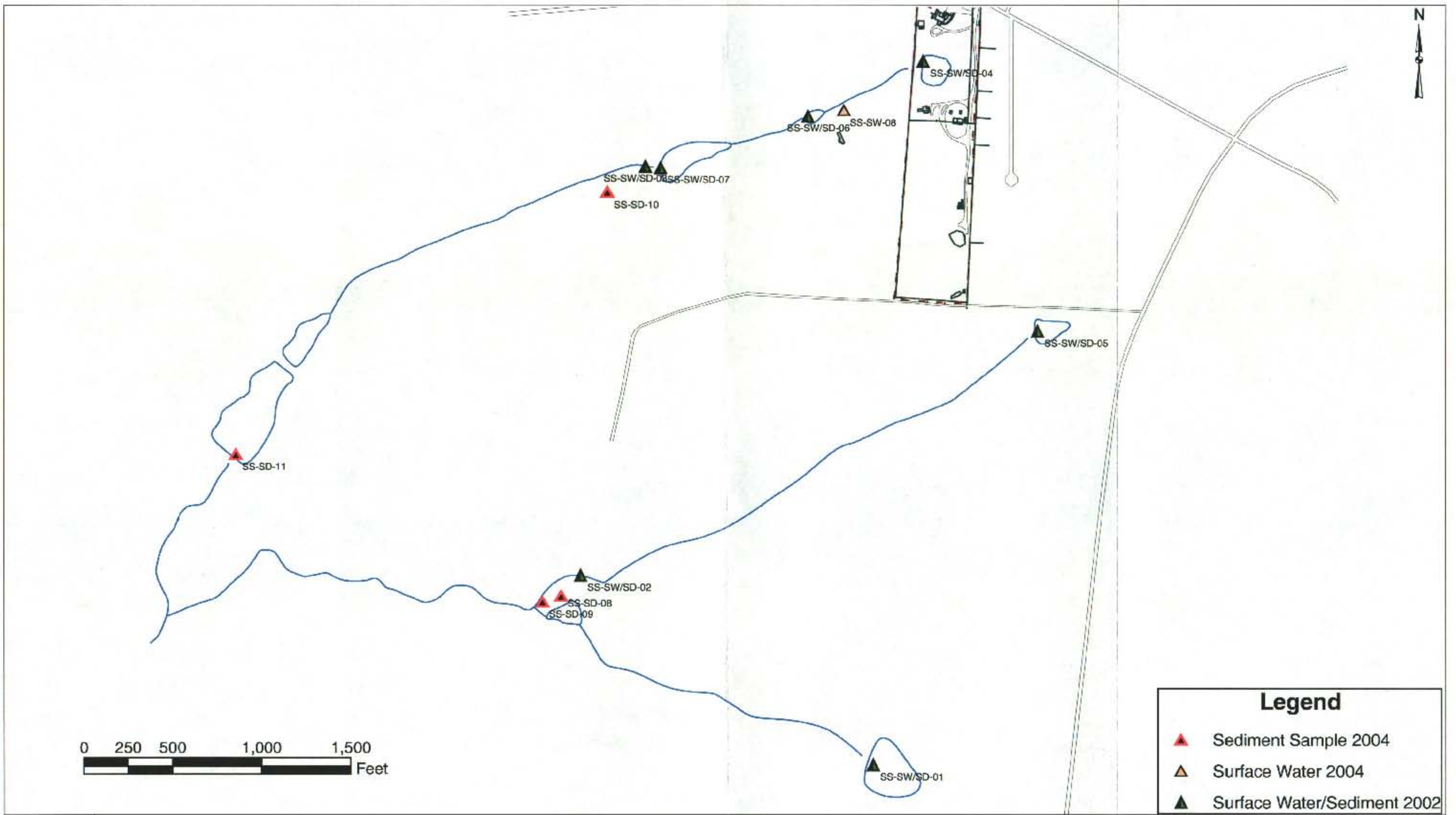
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|          |                         |      |          |
|          |                         |      |          |
| Symptoms | Cause(s) /<br>Revisions | Date | Assessed |



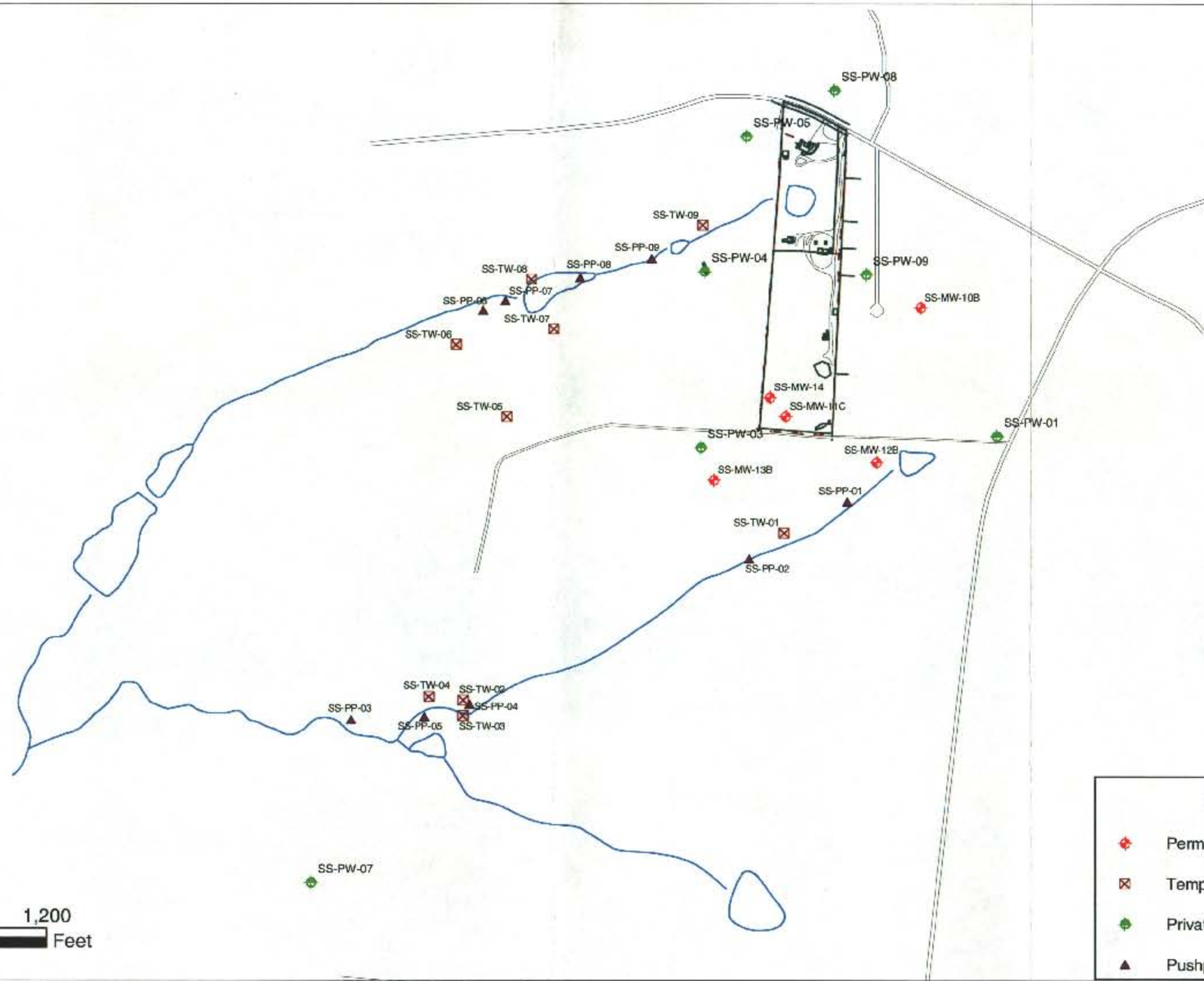
**Legend**

● XRF Subsurface Soil 2005

| <b>Figure 5-7</b>                                                                                                                                             | <b>Sigmon's Septic Tank Site</b><br>Statesville, Iredell County,<br>North Carolina | <b>XRF Subsurface Soil Sample Locations 2005</b>                                                                                                                                                                                                                                                                                                                                                                  |                                                                  | Designed By: _____ Date: _____ | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">           Drawn By: _____<br/>           Checked By: _____<br/>           Reviewed By: _____         </td> <td style="width: 50%;">           Title No.: _____<br/>           Drawing Name: _____<br/>           Project Number: _____         </td> </tr> <tr> <td colspan="2">           Revision History:           <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 45%;">Description</th> <th style="width: 15%;">Date</th> <th style="width: 35%;">Revised By</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> </td> </tr> </table> | Drawn By: _____<br>Checked By: _____<br>Reviewed By: _____ | Title No.: _____<br>Drawing Name: _____<br>Project Number: _____ | Revision History: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 45%;">Description</th> <th style="width: 15%;">Date</th> <th style="width: 35%;">Revised By</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> |  | No. | Description | Date | Revised By |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                                                                                                                                               |                                                                                    | Drawn By: _____<br>Checked By: _____<br>Reviewed By: _____                                                                                                                                                                                                                                                                                                                                                        | Title No.: _____<br>Drawing Name: _____<br>Project Number: _____ |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                               |                                                                                    | Revision History: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 45%;">Description</th> <th style="width: 15%;">Date</th> <th style="width: 35%;">Revised By</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> |                                                                  | No.                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Description                                                | Date                                                             | Revised By                                                                                                                                                                                                                                                                                                                                                                                                        |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                               |                                                                                    | No.                                                                                                                                                                                                                                                                                                                                                                                                               | Description                                                      | Date                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Revised By                                                 |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                               |                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                               |                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                               |                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>BLACK &amp; VEATCH</b><br><i>Special Projects Corp.</i>                                                                                                    |                                                                                    | Date: _____                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
| Project Number: _____                                                                                                                                         |                                                                                    | Date: _____                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |
| <div style="display: flex; justify-content: space-between;"> <span>1</span> <span>2</span> <span>3</span> <span>4</span> <span>5</span> <span>6</span> </div> |                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                            |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                   |  |     |             |      |            |  |  |  |  |  |  |  |  |  |  |  |  |



Surface Water and Sediment Sample Locations (2002 & 2004)  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina



Permanent Monitoring Well, Private Potable Well, Temporary Monitoring Well, and Pushpoint Sample Locations  
 Sigmon's Septic Tank Site  
 Statesville, Iredell County, North Carolina

Figure  
 5-9

## **APPENDIX B**

### **Data Tables**

**Table 5-1**  
**Analytical Results for ESI Groundwater Samples**  
**Sigmon's Septic Tank Service**

| Sample Description       | SST-001-MW                    | SST-002-PW | SST-003-PW        | SST-103-PW                               | SST-004-PW       | SST-005-PW              | SST-006-PW            | SST-007-PW       | SST-008-PW         | Region 9<br>PRGs<br>(Tap Water<br>Values) | Federal<br>MCL | North<br>Carolina<br>2L<br>Standards |
|--------------------------|-------------------------------|------------|-------------------|------------------------------------------|------------------|-------------------------|-----------------------|------------------|--------------------|-------------------------------------------|----------------|--------------------------------------|
| Contaminant              | On-site<br>Monitoring<br>well | Lees well  | Cascadden<br>well | Duplicate of<br>the<br>Cascadden<br>well | Sheppard<br>well | Lambreth/<br>Potts well | John<br>Lambreth well | Davidson<br>well | Background<br>well |                                           |                |                                      |
| <b>Inorganics (ug/L)</b> |                               |            |                   |                                          |                  |                         |                       |                  |                    |                                           |                |                                      |
| Aluminum                 | 8800                          | --         | --                | --                                       | --               | --                      | --                    | --               | 49U                | 3600                                      | 50 to 200*     | ND                                   |
| Arsenic                  | 4.2J                          | --         | --                | --                                       | --               | --                      | --                    | --               | 2.2UJ              | 0.045                                     | 50             | 50                                   |
| Barium                   | 620                           | 16         | 380               | 380                                      | 83               | 31                      | 32                    | --               | 22                 | 260                                       | 2000           | 2000                                 |
| Calcium                  | 210000                        | 12000      | 22000             | 24000                                    | 13000            | 2700                    | 4500                  | 6200             | 2800               | ND                                        | ND             | ND                                   |
| Chromium                 | 86                            | --         | --                | --                                       | --               | --                      | --                    | --               | 0.70U              | 11                                        | 100            | 50                                   |
| Cobalt                   | 39                            | --         | 2.6               | 2.4                                      | 1.2              | --                      | --                    | --               | 0.60U              | 220                                       | ND             | ND                                   |
| Copper                   | 26J                           | --         | 33J               | --                                       | --               | --                      | --                    | 38J              | 30J                | 140                                       | 1300**         | 1000                                 |
| Iron                     | 11000                         | --         | --                | --                                       | --               | --                      | --                    | --               | 60U                | 1100                                      | 300*           | 300                                  |
| Lead                     | 12                            | --         | 4.4               | 3                                        | --               | 2                       | 4.6                   | 8.6              | 3.4                | ND                                        | 15**           | 15                                   |
| Magnesium                | 64000                         | --         | 10000             | 10000                                    | 3800             | --                      | --                    | 1600             | 400U               | ND                                        | ND             | ND                                   |
| Manganese                | 27000                         | 21         | 260               | 260                                      | 100              | 15                      | 7                     | --               | 4.2                | 88                                        | ND             | 50                                   |
| Mercury                  | 6.6J                          | --         | 1.3J              | 1.1J                                     | 4.6J             | --                      | --                    | --               | 0.10UJ             | 1.1                                       | 2              | 1.1                                  |
| Nickel                   | 73                            | --         | 4.2               | 2.3                                      | --               | --                      | --                    | --               | 1.3U               | 73                                        | ND             | 100                                  |
| Potassium                | 11000J                        | 1300J      | 4700J             | 4700J                                    | 2400J            | 1800J                   | 1900J                 | 1800J            | 1500J              | ND                                        | ND             | ND                                   |
| Sodium                   | 120000                        | 3300       | 7800              | 8600                                     | 5000             | 2200                    | 1600                  | 5100             | 1400               | ND                                        | ND             | ND                                   |
| Zinc                     | 44                            | 110        | 31                | 28                                       | --               | --                      | 200                   | 820              | 560                | 1100                                      | ND             | 2100                                 |
| <b>Organic (ug/L)</b>    |                               |            |                   |                                          |                  |                         |                       |                  |                    |                                           |                |                                      |
| 1,1-dichloroethane       | 3                             | --         | 0.6J              | 0.6J                                     | 0.8J             | --                      | --                    | --               | 1U                 | 81                                        | ND             | 700                                  |
| 1,2-dichlorobenzene      | 8                             | --         | --                | --                                       | --               | --                      | --                    | --               | 1U                 | 37                                        | 600            | 620                                  |
| 1,3-dichlorobenzene      | 1                             | --         | --                | --                                       | --               | --                      | --                    | --               | 1U                 | 0.55                                      | 600            | 620                                  |
| 1,4-dichlorobenzene      | 11                            | --         | 0.6J              | 0.6J                                     | 2                | --                      | --                    | --               | 1U                 | 0.5                                       | 75             | 75                                   |
| Acetone                  | 29J                           | 5J         | --                | --                                       | --               | --                      | --                    | --               | 5UR                | 61                                        | ND             | 700                                  |
| Benzene                  | 2                             | --         | --                | --                                       | 0.4J             | --                      | --                    | --               | 1U                 | 0.35                                      | 5              | 1                                    |
| Chlorobenzene            | 72                            | --         | --                | --                                       | --               | --                      | --                    | --               | 1U                 | 11                                        | ND             | 50                                   |
| Chloroethane             | 1                             | --         | --                | --                                       | --               | --                      | --                    | --               | 1U                 | 4.6                                       | ND             | ND                                   |
| cis-1,2-dichloroethene   | 3                             | --         | 0.8J              | 0.8J                                     | 0.8J             | --                      | --                    | --               | 1U                 | 6.1                                       | 70             | 70                                   |
| Xylenes, total           | 2                             | --         | --                | --                                       | 0.5J             | --                      | --                    | --               | 1U                 | 140                                       | 10000          | 530                                  |

**Notes:**

ND = Not Determined

-- = Indicates that the constituent was not detected above the sample quantitation limit.

\* = Secondary drinking water regulation

\*\* = Action level

Shading = Exceeds PRG, MCL, or NC 2L Standards

**Table 5-2**  
**Analytical Results for ESI Soil Samples**  
**Sigmon's Septic Tank Service**

| Sample Description        | SST-009-WS                | SST-010-WS                | SST-011-WS                       | SST-012-WS                       | SST-013-WS                       | SST-113-WS                | SST-014-SS                | SST-014-SB                 | SST-017-SL                                                      | SST-018-SL                                                      | Region 9<br>PRGs<br>(Residential<br>Values) | NC Soil<br>Values | EPA<br>SSLs |
|---------------------------|---------------------------|---------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------|---------------------------|----------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------|-------------------|-------------|
| Contaminant               | Waste Pile<br>(0-12" bls) | Waste Pile<br>(0-12" bls) | Lagoon<br>sample<br>(12-24" bls) | Lagoon<br>sample<br>(12-48" bls) | Lagoon<br>sample<br>(12-24" bls) | Duplicate<br>(12-24" bls) | Background<br>(6-12" bls) | Background<br>(24-36" bls) | Drainage ditch<br>on Lauren Dr.,<br>west of pond<br>(0-12" bls) | Drainage ditch<br>on Lauren Dr.,<br>east of pond<br>(0-12" bls) |                                             |                   |             |
| <b>Inorganics (mg/kg)</b> |                           |                           |                                  |                                  |                                  |                           |                           |                            |                                                                 |                                                                 |                                             |                   |             |
| Aluminum                  | 31000                     | 16000                     | 48000                            | 11000                            | 25000                            | 22000                     | 11000                     | 33000                      | 30000                                                           | 15000                                                           | 7600                                        | ND                | 50          |
| Antimony                  | --                        | 42J                       | --                               | 28J                              | 25J                              | 29J                       | 0.49UJ                    | 0.52UJ                     | --                                                              | --                                                              | 3.1                                         | ND                | 3.5         |
| Arsenic                   | 3.2                       | 3.8                       | 2.2                              | 2.4                              | --                               | 2                         | 1.3U                      | 3.2                        | 2.7                                                             | 3.4                                                             | 0.39                                        | ND                | 10          |
| Barium                    | 230                       | 310                       | 140                              | 310                              | 1200                             | 1400                      | 17                        | 18                         | 85                                                              | 160                                                             | 540                                         | 848               | 165         |
| Cadmium                   | 4.6J                      | 3.9J                      | 0.57J                            | 3.8J                             | 2.8J                             | 3.5J                      | 0.07UJ                    | 0.07UJ                     | --                                                              | --                                                              | 3.7                                         | ND                | 1.6         |
| Calcium                   | 4100                      | 6500                      | 1700                             | 9600                             | 5600                             | 9100                      | 600U                      | 640U                       | --                                                              | 2700                                                            | ND                                          | ND                | ND          |
| Chromium, total           | 75                        | 60                        | 40                               | 68                               | 120                              | 140                       | 7.9                       | 19                         | 21                                                              | 31                                                              | 30                                          | 27                | 0.4         |
| Cobalt                    | --                        | --                        | --                               | --                               | --                               | --                        | 0.89UJ                    | 1.5UJ                      | --                                                              | 7.8J                                                            | 470                                         | ND                | 20          |
| Copper                    | 200J                      | 380J                      | 64J                              | 340J                             | 260J                             | 310J                      | 3.4UJ                     | 2.7UJ                      | 10J                                                             | 24J                                                             | 290                                         | ND                | 40          |
| Iron                      | 23000                     | 17000                     | 24000                            | 9700                             | 17000                            | 17000                     | 8200                      | 29000                      | 20000                                                           | 19000                                                           | 2300                                        | ND                | 200         |
| Lead                      | 180J                      | 180J                      | 84J                              | 170J                             | 210J                             | 250J                      | 5.8J                      | 10J                        | 13J                                                             | 12J                                                             | 40                                          | 270               | 50          |
| Magnesium                 | 4100                      | 2700                      | 3800                             | 1200                             | 2800                             | 3000                      | 180                       | 450                        | 1300                                                            | 4200                                                            | ND                                          | ND                | ND          |
| Manganese                 | 290                       | 180                       | 220                              | 160                              | 220                              | 240                       | 37                        | 47                         | 240                                                             | 180                                                             | 180                                         | ND                | 100         |
| Mercury                   | 0.26                      | 0.56                      | --                               | 0.51                             | 0.61                             | 0.8                       | 0.05U                     | 0.06U                      | --                                                              | --                                                              | 2.3                                         | ND                | 0.1         |
| Nickel                    | 74                        | 61                        | 20                               | 33                               | 310                              | 350                       | 2                         | 4                          | 8.2                                                             | 17                                                              | 160                                         | ND                | 30          |
| Potassium                 | 3200                      | 2200                      | 3300                             | 990                              | 2400                             | 2500                      | 240                       | 570                        | 1100                                                            | 4000                                                            | ND                                          | ND                | ND          |
| Selenium                  | --                        | --                        | --                               | 2.5J                             | 1.6J                             | 2J                        | 0.42UJ                    | 0.44UJ                     | --                                                              | --                                                              | 39                                          | ND                | 0.81        |
| Silver                    | 3.5                       | --                        | 3.2                              | --                               | --                               | --                        | 0.28U                     | 1.2U                       | --                                                              | --                                                              | 39                                          | ND                | 2           |
| Sodium                    | 380                       | 1200                      | 760                              | 1200                             | 3100                             | 4000                      | 36U                       | 38U                        | --                                                              | 110                                                             | ND                                          | ND                | ND          |
| Vanadium                  | 49                        | 41                        | 56                               | 27                               | 36                               | 36                        | 20                        | 69                         | 46                                                              | 45                                                              | 55                                          | ND                | 2           |
| Zinc                      | 870                       | 880                       | 310                              | 1400                             | 930                              | 1100                      | 7.4                       | 11                         | 36                                                              | 100                                                             | 2300                                        | ND                | 50          |
| <b>Organics (ug/kg)</b>   |                           |                           |                                  |                                  |                                  |                           |                           |                            |                                                                 |                                                                 |                                             |                   |             |
| (3 &/or 4) methylphenol   | --                        | 7200J                     | --                               | 48000                            | 23000                            | 23000                     | 370U                      | 50J                        | --                                                              | --                                                              | 31000                                       | ND                | ND          |
| 1,1-biphenyl              | 1700J                     | --                        | --                               | 2100J                            | 2400J                            | 3500J                     | 370U                      | 400U                       | --                                                              | --                                                              | 3500000                                     | ND                | 60000       |
| 4-chloroaniline           | 14000J                    | 3400J                     | 89J                              | 9400J                            | 14000J                           | 9800J                     | 11U                       | 130J                       | --                                                              | --                                                              | 24000                                       | ND                | ND          |
| 1,2-dichlorobenzene       | --                        | 250                       | 6J                               | --                               | --                               | --                        | 11U                       | 12U                        | --                                                              | --                                                              | 3700000                                     | 7000              | ND          |
| 1,3-dichlorobenzene       | 7J                        | 19                        | --                               | --                               | 76                               | 170                       | 11U                       | 12U                        | --                                                              | --                                                              | 1300                                        | 24000             | ND          |
| 1,4-dichlorobenzene       | 24                        | 120                       | 44                               | 10J                              | 290                              | 100                       | 11U                       | 12U                        | --                                                              | --                                                              | 3400                                        | 1000              | ND          |
| 2,4-dinitrotoluene        | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 45J                        | --                                                              | --                                                              | 720                                         | ND                | ND          |
| 2-methylnaphthalene       | 3600J                     | 1900J                     | --                               | 2200J                            | 2700J                            | 4300J                     | 370U                      | 400U                       | --                                                              | --                                                              | ND                                          | 3000              | ND          |
| 4-nitrophenol             | --                        | --                        | --                               | --                               | --                               | --                        | 920U                      | 79J                        | --                                                              | --                                                              | 49000                                       | ND                | ND          |
| Acenaphthene              | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 60J                        | --                                                              | 130J                                                            | 370000                                      | 8000              | 20000       |
| Acetone                   | --                        | 21                        | 67                               | 43                               | 160                              | 130                       | 11U                       | 12U                        | --                                                              | --                                                              | 160000                                      | 2810              | ND          |
| Anthracene                | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 250J                                                            | 2200000                                     | 995000            | 100         |
| Benzaldehyde              | --                        | --                        | --                               | 3000J                            | --                               | --                        | 370U                      | 400U                       | 440J                                                            | 52J                                                             | 610000                                      | ND                | ND          |
| Benzene                   | --                        | --                        | 18                               | --                               | 14J                              | 14J                       | 11U                       | 12U                        | --                                                              | --                                                              | 650                                         | 5.6               | 50          |
| Benzo(a)anthracene        | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 830                                                             | 620                                         | 340               | ND          |
| Benzo(a)pyrene            | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 730                                                             | 62                                          | 88                | 100         |
| Benzo(b)fluoranthene      | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 960                                                             | 620                                         | 1000              | ND          |
| Benzo(ghi)anthracene      | --                        | --                        | --                               | --                               | --                               | --                        | 370UJ                     | 400UJ                      | --                                                              | 280J                                                            | ND                                          | 6720000           | ND          |
| Benzo(k)fluoranthene      | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 840                                                             | 6200                                        | 12000             | ND          |
| BenzyI butyl phthalate    | 220000                    | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | --                                                              | ND                                          | ND                | ND          |

**Table 5-2**  
**Analytical Results for ESI Soil Samples**  
**Sigmon's Septic Tank Service**

| Sample Description         | SST-009-WS                | SST-010-WS                | SST-011-WS                       | SST-012-WS                       | SST-013-WS                       | SST-113-WS                | SST-014-SS                | SST-014-SB                 | SST-017-SL                                                      | SST-018-SL                                                      | Region 9<br>PRGs<br>(Residential<br>Values) | NC Soil<br>Values | EPA<br>SSLs |
|----------------------------|---------------------------|---------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------|---------------------------|----------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------|-------------------|-------------|
| Contaminant                | Waste Pile<br>(0-12" bls) | Waste Pile<br>(0-12" bls) | Lagoon<br>sample<br>(12-24" bls) | Lagoon<br>sample<br>(12-48" bls) | Lagoon<br>sample<br>(12-24" bls) | Duplicate<br>(12-24" bls) | Background<br>(6-12" bls) | Background<br>(24-36" bls) | Drainage ditch<br>on Lauren Dr.,<br>west of pond<br>(0-12" bls) | Drainage ditch<br>on Lauren Dr.,<br>east of pond<br>(0-12" bls) |                                             |                   |             |
| bis(2-ethylhexyl)phthalate | 240000                    | 38000                     | 920J                             | 100000                           | 97000                            | 74000                     | 370U                      | 2700                       | --                                                              | --                                                              | 35000                                       | ND                | ND          |
| Carbazole                  | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 270J                                                            | 24000                                       | ND                | ND          |
| Carbon disulfide           | 5J                        | 4J                        | 7J                               | 4J                               | 8J                               | 9J                        | 11U                       | 12U                        | --                                                              | --                                                              | 36000                                       | 4000              | ND          |
| Chlorobenzene              | 11J                       | 9J                        | 74                               | 10J                              | 5000J                            | 200                       | 11U                       | 12U                        | --                                                              | --                                                              | 15000                                       | ND                | 50          |
| Chrysene                   | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 920                                                             | 62000                                       | 38000             | ND          |
| Cyclohexane                | --                        | --                        | 39                               | --                               | --                               | --                        | 11U                       | 12U                        | --                                                              | --                                                              | 1400000                                     | ND                | 100         |
| Dibenzofuran               | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 68J                                                             | 29000                                       | 4700              | ND          |
| Dimethyl phthalate         | --                        | --                        | --                               | --                               | --                               | 47000                     | 370U                      | 400U                       | --                                                              | 460                                                             | 100000000                                   | ND                | 200000      |
| Ethyl benzene              | --                        | 41                        | 300                              | --                               | 190                              | 280                       | 11U                       | 12U                        | --                                                              | --                                                              | 2300000                                     | 240               | 50          |
| Fluoranthene               | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 1600                                                            | 230000                                      | 276000            | 100         |
| Fluorene                   | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 120J                                                            | 260000                                      | 44000             | ND          |
| Ideno(1,2,3-cd)pyrene      | --                        | --                        | --                               | --                               | --                               | --                        | 370UJ                     | 400UJ                      | --                                                              | 320J                                                            | 620                                         | 3000              | ND          |
| Isopropylbenzene           | --                        | --                        | 12J                              | --                               | 11J                              | 16J                       | 11U                       | 12U                        | --                                                              | --                                                              | ND                                          | 2000              | ND          |
| Methyl butyl ketone        | --                        | 270                       | --                               | --                               | --                               | --                        | 11U                       | 12U                        | --                                                              | --                                                              | ND                                          | ND                | ND          |
| Methyl ethyl ketone        | --                        | --                        | 34                               | --                               | 76                               | 70                        | 11U                       | 12U                        | --                                                              | --                                                              | 730000                                      | 690               | ND          |
| Methyl isobutyl ketone     | --                        | --                        | --                               | --                               | --                               | 80                        | 11U                       | 12U                        | --                                                              | --                                                              | 79000                                       | ND                | ND          |
| Methylcyclohexane          | 5J                        | 40                        | 180                              | --                               | 26                               | 38                        | 11U                       | 12U                        | --                                                              | --                                                              | 260000                                      | ND                | ND          |
| Naphthalene                | 3700J                     | 2500J                     | --                               | 2000J                            | 6200J                            | 11000J                    | 370U                      | 400U                       | --                                                              | --                                                              | 5600                                        | 580               | 100         |
| n-nitroso di-n-propylamine | --                        | --                        | --                               | --                               | --                               | --                        | 11U                       | 70J                        | --                                                              | --                                                              | 69                                          | ND                | 20000       |
| Phenanthrene               | 1800J                     | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 1200                                                            | ND                                          | 60000             | 100         |
| Phenol                     | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 90J                        | --                                                              | --                                                              | 3700000                                     | ND                | 50          |
| Pyrene                     | --                        | --                        | --                               | --                               | --                               | --                        | 370U                      | 400U                       | --                                                              | 1600                                                            | 230000                                      | 286000            | 100         |
| Styrene                    | --                        | --                        | --                               | --                               | --                               | --                        | 11U                       | 12U                        | 4J                                                              | --                                                              | 1700000                                     | ND                | 100         |
| Tetrachloroethylene        | --                        | 5J                        | --                               | --                               | --                               | --                        | 11U                       | 12U                        | --                                                              | --                                                              | 5700                                        | 7.4               | 10          |
| Toluene                    | 17                        | 63                        | 210                              | 4J                               | 7000J                            | 290                       | 11U                       | 12U                        | --                                                              | --                                                              | 520000                                      | 7000              | 50          |
| Xylenes, total             | --                        | 200                       | 1300                             | 15J                              | 730                              | 200                       | 11U                       | 12U                        | --                                                              | --                                                              | 210000                                      | 5000              | 50          |

ND = Not Determined

-- Indicates that the constituent was not detected above the sample quantitation limit.

Shading = Exceeds PRG, NC soil value, or EPA SSL.

**Table 5-3**  
**Analytical Results for ESI Surface Water Samples**  
**Sigmon's Septic Tank Service**

| Sample Description      | SST-019-SW                                                                    | SST-020-SW                                                                               | SST-021-SW                                                                        | SST-022-SW                                                                      | SST-023-SW                                         | SST-024-SW                      |                                        |                                        |                     |
|-------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------|----------------------------------------|----------------------------------------|---------------------|
|                         | Davidson pond surface water sample(at culvert discharge into the pond). PPE#1 | Davidson pond surface water sample(at the discharge into the intermittent stream). PPE#1 | Surface water attribution sample for PPE#2 from an unnamed tributary (background) | Surface water sample downstream of pond in intermittent tributary (attribution) | Upstream surface water sample on unnamed tributary | Surface water sample from PPE#2 | NC Freshwater Standards (Human Health) | NC Freshwater Standards (Aquatic Life) | EPA Freshwater SWSV |
| <b>Contaminant</b>      |                                                                               |                                                                                          |                                                                                   |                                                                                 |                                                    |                                 |                                        |                                        |                     |
| <b>Inorganic (ug/L)</b> |                                                                               |                                                                                          |                                                                                   |                                                                                 |                                                    |                                 |                                        |                                        |                     |
| Aluminum                | --                                                                            | 1900                                                                                     | 420U                                                                              | --                                                                              | --                                                 | --                              | ND                                     | ND                                     | 87                  |
| Arsenic                 | 4.8J                                                                          | 3.6J                                                                                     | 2.2UJ                                                                             | --                                                                              | --                                                 | 18J                             | ND                                     | 50                                     | 190                 |
| Barium                  | 210                                                                           | 120                                                                                      | 3.6U                                                                              | 14                                                                              | 26                                                 | 15                              | ND                                     | ND                                     | ND                  |
| Cadmium                 | 1.2                                                                           | --                                                                                       | 0.30U                                                                             | --                                                                              | 1                                                  | --                              | ND                                     | 2                                      | 0.66                |
| Calcium                 | 8700                                                                          | 6300                                                                                     | 2600U                                                                             | 4000                                                                            | 6000                                               | 4300                            | ND                                     | ND                                     | ND                  |
| Cobalt                  | 14                                                                            | 4.8                                                                                      | 0.60U                                                                             | --                                                                              | --                                                 | --                              | ND                                     | ND                                     | ND                  |
| Iron                    | 7000                                                                          | 3400                                                                                     | 360U                                                                              | --                                                                              | 740                                                | --                              | ND                                     | 1000                                   | 1000                |
| Lead                    | 1.3                                                                           | 4.1                                                                                      | 1.1U                                                                              | --                                                                              | --                                                 | --                              | ND                                     | 25                                     | 1.32                |
| Magnesium               | 2700                                                                          | 2000                                                                                     | 1400                                                                              | 1200                                                                            | 2700                                               | 1500                            | ND                                     | ND                                     | ND                  |
| Manganese               | 1300                                                                          | 770                                                                                      | 9.4                                                                               | 11                                                                              | 130                                                | 35                              | ND                                     | ND                                     | ND                  |
| Nickel                  | 11                                                                            | 4.3                                                                                      | 1.3U                                                                              | --                                                                              | --                                                 | --                              | ND                                     | 88                                     | 87.71               |
| Potassium               | 20000J                                                                        | 16000J                                                                                   | 4200J                                                                             | 1600J                                                                           | 4300J                                              | 2400J                           | ND                                     | ND                                     | ND                  |
| Sodium                  | 4400                                                                          | 1400                                                                                     | 160U                                                                              | 4200                                                                            | 4900                                               | 4200                            | ND                                     | ND                                     | ND                  |
| Zinc                    | 220                                                                           | 85                                                                                       | 1.3U                                                                              | --                                                                              | --                                                 | --                              | ND                                     | 50                                     | 58.91               |
| <b>Organic (ug/L)</b>   |                                                                               |                                                                                          |                                                                                   |                                                                                 |                                                    |                                 |                                        |                                        |                     |
| Acetone                 | 13J                                                                           | --                                                                                       | 8J                                                                                | --                                                                              | --                                                 | --                              | ND                                     | ND                                     | ND                  |
| Toluene                 | --                                                                            | --                                                                                       | 1U                                                                                | --                                                                              | 0.4J                                               | --                              | ND                                     | 11                                     | 175                 |

-- Indicates that the constituent was not detected above the sample quantitation limit.

ND = Not Determined

Shading = Exceeds screening value

**Table 5-4**  
**Analytical Results for ESI Sediment Samples**  
**Sigmon's Septic Tank Service**

| Sample Description       | SST-019-SD                                                                        | SST-020-SD                                                                                      | SST-17-SL                                       | SST-18-SL                                       | SST-021-SD                                                                                | SST-022-SD                                                                          | SST-023-SD                                          | SST-024-SD                    | EPA<br>Sediment<br>Screening<br>Values |
|--------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------|----------------------------------------|
|                          | Davidson pond<br>sediment sample(at<br>culvert discharge into<br>the pond). PPE#1 | Davidson pond<br>sediment sample(at<br>the discharge into<br>the intermittent<br>stream). PPE#1 | Drainage Ditch from<br>Site to Davidson<br>pond | Drainage Ditch from<br>road to Davidson<br>pond | Sedimentr attribution<br>sample for PPE#2<br>from an unnamed<br>tributary<br>(background) | Sediment sample<br>downstream of pond<br>in intermittent<br>tributary (attribution) | Upstream sediment<br>sample on unnamed<br>tributary | Sediment sample<br>from PPE#2 |                                        |
| <b>Contaminant</b>       |                                                                                   |                                                                                                 |                                                 |                                                 |                                                                                           |                                                                                     |                                                     |                               |                                        |
| <b>Inorganic (mg/kg)</b> |                                                                                   |                                                                                                 |                                                 |                                                 |                                                                                           |                                                                                     |                                                     |                               |                                        |
| Aluminum                 | 40000                                                                             | 19000                                                                                           | 30000                                           | 15000                                           | 37000                                                                                     | 3900                                                                                | 9100                                                | 1400                          | ND                                     |
| Arsenic                  | 8                                                                                 | 1.5                                                                                             | 2.7                                             | 3.4                                             | 3.7                                                                                       | --                                                                                  | --                                                  | --                            | 7.24                                   |
| Barium                   | 210                                                                               | 28                                                                                              | 85                                              | 160                                             | 82                                                                                        | 34                                                                                  | 64                                                  | 10                            | ND                                     |
| Calcium                  | 110                                                                               | --                                                                                              | --                                              | 2700                                            | 2000U                                                                                     | --                                                                                  | --                                                  | --                            | ND                                     |
| Chromium                 | 46                                                                                | 8.1                                                                                             | 21                                              | 31                                              | 16                                                                                        | 7.7                                                                                 | 14                                                  | 3.5                           | 52.3                                   |
| Copper                   | 37J                                                                               | --                                                                                              | 10J                                             | 24J                                             | 11U                                                                                       | --                                                                                  | --                                                  | --                            | 18.7                                   |
| Iron                     | 37000                                                                             | 16000                                                                                           | 20000                                           | 19000                                           | 11UJ                                                                                      | 5200                                                                                | 12000                                               | 3200                          | ND                                     |
| Lead                     | 21J                                                                               | 8J                                                                                              | 13J                                             | 12J                                             | 21J                                                                                       | 2J                                                                                  | 9.2J                                                | 1.6J                          | 30.2                                   |
| Magnesium                | 5400                                                                              | 1300                                                                                            | 180                                             | 450                                             | 2600                                                                                      | 940                                                                                 | 550                                                 | 180                           | ND                                     |
| Manganese                | 140                                                                               | 99                                                                                              | 37                                              | 47                                              | 120                                                                                       | 280                                                                                 | 380                                                 | 44                            | ND                                     |
| Nickel                   | 21                                                                                | 3.5                                                                                             | 8.2                                             | 17                                              | 7.7                                                                                       | 3.7                                                                                 | 4.3                                                 | 0.9                           | 15.9                                   |
| Potassium                | 5100                                                                              | 1700                                                                                            | 1100                                            | 4000                                            | 2200                                                                                      | 780                                                                                 | 580                                                 | 240                           | ND                                     |
| Sodium                   | 98                                                                                | 99                                                                                              | --                                              | 110                                             | 120U                                                                                      | --                                                                                  | --                                                  | --                            | ND                                     |
| Vanadium                 | 85                                                                                | 35                                                                                              | 46                                              | 45                                              | 54                                                                                        | --                                                                                  | 27                                                  | --                            | ND                                     |
| Zinc                     | 150                                                                               | 27                                                                                              | 36                                              | 100                                             | 45                                                                                        | 13                                                                                  | 30                                                  | 5.6                           | 124                                    |
| <b>Organic (ug/kg)</b>   |                                                                                   |                                                                                                 |                                                 |                                                 |                                                                                           |                                                                                     |                                                     |                               |                                        |
| Anthracene               | 82J                                                                               | --                                                                                              | --                                              | --                                              | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Benzo(a)anthracene       | 430J                                                                              | --                                                                                              | --                                              | 830                                             | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Benzo(a)pyrene           | 450J                                                                              | --                                                                                              | --                                              | 730                                             | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Benzo(b)fluoranthene     | 560                                                                               | --                                                                                              | --                                              | 960                                             | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | ND                                     |
| Benzo(ghi)pyrene         | 170J                                                                              | --                                                                                              | --                                              | 280J                                            | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | ND                                     |
| Benzo(k)fluoranthene     | 480J                                                                              | --                                                                                              | --                                              | 840                                             | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | ND                                     |
| Carbazole                | 99J                                                                               | --                                                                                              | --                                              | --                                              | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | ND                                     |
| Chrysene                 | 510J                                                                              | --                                                                                              | --                                              | 920                                             | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Dibenzo(a,h)anthracene   | 88J                                                                               | --                                                                                              | --                                              | --                                              | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Fluoranthene             | 810                                                                               | --                                                                                              | --                                              | 1600                                            | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Indeno(1,2,3-cd)pyrene   | 210J                                                                              | --                                                                                              | --                                              | 320J                                            | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | ND                                     |
| Phenanthrene             | 450J                                                                              | --                                                                                              | --                                              | --                                              | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |
| Pyrene                   | 810                                                                               | --                                                                                              | --                                              | 1600                                            | 1100U                                                                                     | --                                                                                  | --                                                  | --                            | 330                                    |

-- Indicates that the constituent was not detected above the sample quantitation limit.

ND = Not Determined

Shading = Exceeds Sediment Screening Value

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-07<br>Oct-02 | SS-PW-01<br>Oct-02 | SS-PW-01<br>Oct-02 | SS-PW-01<br>May-04 | SS-PW-01<br>May-04 | SS-PW-03<br>Oct-02 |
|-----------------------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Inorganic Compounds (µg/L)</b> |                        |                         |                           |                    |                    |                    |                    |                    |                    |
| Aluminum                          | 3600                   | 200                     |                           | 200 U              | 200 U              | 200 U              | 56 J               | 200 U              | 200 U              |
| Arsenic                           | 0.045                  | 10                      | 10                        | 0.5 U              | 0.5 U              | 0.5 U              | 1 U                | 1 U                | 1.2 A              |
| Barium                            | 260                    | 2000                    | 2000                      | 16                 | 31                 | 31                 | 37                 | 39                 | 130 A              |
| Beryllium                         | 7.3                    | 4                       |                           | 1.5 U              | 1.5 U              | 1.5 U              | 1 U                | 1 U                | 1.5 U              |
| Calcium                           |                        |                         |                           | 2200               | 1700               | 1700               | 3500 J             | 3200 J             | 39000 A            |
| Cobalt                            | 73                     |                         |                           | 2.5 U              | 2.5 U              | 2.5 U              | 0.08 J             | 0.08 J             | 3.6 A              |
| Copper                            | 150                    | 1300                    | 1000                      | 27                 | 78                 | 45                 | 55 J               | 110 J              | 10 U               |
| Iron                              | 1100                   | 300                     | 300                       | 50 U               | 90                 | 68                 | 47 J               | 100 U              | 250 A              |
| Lead                              | 15                     | 15                      | 15                        | 1.5                | 12                 | 4.3                | 3.8 J              | 7.5 J              | 0.5 U              |
| Magnesium                         |                        |                         |                           | 560                | 400                | 390                | 620 J              | 570 J              | 6900 A             |
| Manganese                         | 88                     | 50                      | 50                        | 5 U                | 26                 | 24                 | 6.7                | 7.1                | 270 A              |
| Mercury                           | 0.36                   | 2                       | 1.1                       | 0.2 U              | 0.2 U              | 0.2 U              | 0.2 U              | 0.2 U              | 2.1 A              |
| Nickel                            | 73                     |                         | 100                       | 5 U                | 5 U                | 5 U                | 0.9 UJ             | 0.91 UJ            | 5 U                |
| Potassium                         |                        |                         |                           | 1500               | 1200               | 1200               | 1200 J             | 1200 J             | 3100 A             |
| Selenium                          | 18                     | 50                      | 50                        | 1 U                | 1 U                | 1 U                | 5 U                | 5 U                | 1 U                |
| Silver                            | 18                     | 100                     | 18                        | 10 U               | 10 U               | 10 U               | 1 U                | 1 U                | 10 U               |
| Sodium                            |                        |                         |                           | 4100               | 3700               | 3600               | 3800 J             | 3600 J             | 9400 A             |
| STRONTIUM                         | 2200                   |                         |                           | 16                 | 12                 | 12                 |                    |                    | 180 A              |
| Vanadium                          | 3.6                    |                         |                           | 2.5 U              | 2.5 U              | 2.5 U              | 1 U                | 1 U                | 2.5 U              |
| YTTRIUM                           |                        |                         |                           | 1.5 U              | 1.5 U              | 1.5 U              |                    |                    | 2.1 A              |
| Zinc                              | 1100                   | 5000                    | 2100                      | 11                 | 5.6                | 5 U                | 10 J               | 12 J               | 5 U                |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-07<br>Oct-02 | SS-PW-01<br>Oct-02 | SS-PW-01<br>Oct-02 | SS-PW-01<br>May-04 | SS-PW-01<br>May-04 | SS-PW-03<br>Oct-02 |
|----------------------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Pesticides/PCB (µg/L)</b>     |                        |                         |                           |                    |                    |                    |                    |                    |                    |
| alpha-BHC                        | 0.011                  |                         | 0.019                     | 0.01 U             | 0.011 U            | 0.011 U            | 0.01 U             | 0.01 U             | 0.027 N            |
| delta-BHC                        |                        |                         | 0.019                     | 0.01 U             | 0.011 U            | 0.011 U            | 0.01 U             | 0.01 U             | 0.012              |
| Endosulfan II                    |                        |                         | 42                        | 0.02 U             | 0.022 U            | 0.022 U            | 0.02 U             | 0.02 U             | 0.011 JN           |
| Endrin aldehyde                  |                        |                         |                           | 0.02 U             | 0.022 U            | 0.022 U            | 0.02 U             | 0.02 U             | 0.017 J            |
| Endrin ketone                    |                        |                         |                           | 0.02 U             | 0.022 U            | 0.022 U            | 0.02 U             | 0.02 U             | 0.02 U             |
| gamma-Chlordane                  | 0.19                   |                         |                           | 0.01 U             | 0.011 U            | 0.011 U            | 0.01 U             | 0.01 U             | 0.67 J             |
| Heptachlor epoxide               | 0.0074                 | 0.2                     | 0.004                     | 0.01 U             | 0.011 U            | 0.011 U            | 0.01 U             | 0.01 U             | 0.01 U             |
| <b>Volatile Compounds (µg/L)</b> |                        |                         |                           |                    |                    |                    |                    |                    |                    |
| 1,1-Dichloroethane               | 81                     |                         | 700                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.69               |
| 1,2-Dichlorobenzene              | 37                     | 600                     | 620                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.46 J             |
| 1,2-Dichloropropane              | 0.16                   | 5                       | 0.56                      | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,4-Dichlorobenzene              | 0.5                    | 75                      | 75                        | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 2.2                |
| 2-Hexanone                       |                        |                         |                           | 5 U                | 5 U                | 5 U                | 5 U                | 5 U                | 5 U                |
| Benzene                          | 0.35                   | 5                       | 1                         | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.26 J             |
| Bromoform                        | 8.5                    |                         | 0.19                      | 0.5 U              | 0.5 U              | 0.5 U              | 1.9 U              | 1.9 U              | 0.5 U              |
| Carbon Disulfide                 | 100                    |                         | 700                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Chlorobenzene                    | 11                     | 100                     | 50                        | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.54               |
| Chloroform                       | 0.17                   |                         | 0.19                      | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| cis-1,2-Dichloroethene           | 6.1                    | 70                      | 70                        | 0.5 U              | 0.5 UJ             | 0.5 UJ             | 0.5 U              | 0.5 U              | 0.52 J             |
| Methyl Acetate                   | 610                    |                         |                           | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Methyl Tert-Butyl Ether          | 11                     |                         | 200                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Methylcyclohexane                | 520                    |                         |                           | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.12 J             |
| Tetrachloroethene                | 0.1                    | 5                       | 0.7                       | 0.5 U              | 0.12 J             | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-03<br>May-04 | SS-PW-04<br>Oct-02 | SS-PW-04<br>May-04 | SS-PW-05<br>Oct-02 | SS-PW-05<br>May-04 | SS-PW-06<br>Oct-02 |
|-----------------------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Inorganic Compounds (µg/L)</b> |                        |                         |                           |                    |                    |                    |                    |                    |                    |
| Aluminum                          | 3600                   | 200                     |                           | 200 U              | 200 U              | 200 U              | 200 U              | 200 U              | 200 U              |
| Arsenic                           | 0.045                  | 10                      | 10                        | 1 UJ               | 0.5 U              | 1 U                | 0.5 U              | 1 U                | 0.5 U              |
| Barium                            | 260                    | 2000                    | 2000                      | 67                 | 53                 | 110                | 52                 | 56                 | 30                 |
| Beryllium                         | 7.3                    | 4                       |                           | 1 U                | 1.5 U              | 0.14 J             | 1.5 U              | 1 U                | 1.5 U              |
| Calcium                           |                        |                         |                           | 36000              | 5000               | 5500               | 4000               | 5300               | 3400               |
| Cobalt                            | 73                     |                         |                           | 0.16 J             | 2.5 U              | 0.35 J             | 2.5 U              | 0.33 J             | 2.5 U              |
| Copper                            | 150                    | 1300                    | 1000                      | 2.8                | 34                 | 72 J               | 74                 | 100 J              | 20                 |
| Iron                              | 1100                   | 300                     | 300                       | 100 UJ             | 50 U               | 100 U              | 50 U               | 100 U              | 50 U               |
| Lead                              | 15                     | 15                      | 15                        | 0.09 UJ            | 5                  | 4.4 J              | 1.4                | 3.1 J              | 1.3                |
| Magnesium                         |                        |                         |                           | 3100 J             | 1400               | 2200 J             | 1100               | 1100 J             | 700                |
| Manganese                         | 88                     | 50                      | 50                        | 20                 | 8.2                | 18                 | 5.5                | 5.4                | 9.3                |
| Mercury                           | 0.36                   | 2                       | 1.1                       | 0.98               | 0.2 U              | 0.2 U              | 0.2 U              | 0.2 U              | 0.2 U              |
| Nickel                            | 73                     |                         | 100                       | 3.2                | 5 U                | 1.9                | 5 U                | 1.3                | 5 U                |
| Potassium                         |                        |                         |                           | 2600 J             | 1900               | 2400 J             | 1700               | 1500 J             | 1300               |
| Selenium                          | 18                     | 50                      | 50                        | 0.43 J             | 1 U                | 5 U                | 1 U                | 5 U                | 1 U                |
| Silver                            | 18                     | 100                     | 18                        | 0.07 J             | 10 U               | 1 U                | 10 U               | 1 U                | 10 U               |
| Sodium                            |                        |                         |                           | 6000               | 2600               | 4000 J             | 1900               | 1800 J             | 1000 U             |
| STRONTIUM                         | 2200                   |                         |                           |                    | 33                 |                    | 14                 |                    | 18                 |
| Vanadium                          | 3.6                    |                         |                           | 0.45 J             | 2.5 U              | 1 U                | 2.5 U              | 1 U                | 2.5 U              |
| YTTRIUM                           |                        |                         |                           |                    | 1.5 U              |                    | 1.5 U              |                    | 1.5 U              |
| Zinc                              | 1100                   | 5000                    | 2100                      | 4.9 J              | 280                | 330 J              | 24                 | 42                 | 14                 |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-03<br>May-04 | SS-PW-04<br>Oct-02 | SS-PW-04<br>May-04 | SS-PW-05<br>Oct-02 | SS-PW-05<br>May-04 | SS-PW-06<br>Oct-02 |
|----------------------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Pesticides/PCB (µg/L)</b>     |                        |                         |                           |                    |                    |                    |                    |                    |                    |
| alpha-BHC                        | 0.011                  |                         | 0.019                     | 0.01 UJ            | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             |
| delta-BHC                        |                        |                         | 0.019                     | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             |
| Endosulfan II                    |                        |                         | 42                        | 0.02 U             | 0.02 U             | 0.02 U             | 0.02 U             | 0.02 U             | 0.02 U             |
| Endrin aldehyde                  |                        |                         |                           | 0.02 U             | 0.02 U             | 0.015 NJ           | 0.02 U             | 0.02 U             | 0.02 U             |
| Endrin ketone                    |                        |                         |                           | 0.02 U             | 0.02 U             | 0.02 U             | 0.02 U             | 0.02 U             | 0.02 U             |
| gamma-Chlordane                  | 0.19                   |                         |                           | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             | 0.01 U             |
| Heptachlor epoxide               | 0.0074                 | 0.2                     | 0.004                     | 0.01 U             | 0.01 U             | 0.01 U             | 0.032              | 0.01               | 0.01 U             |
| <b>Volatile Compounds (µg/L)</b> |                        |                         |                           |                    |                    |                    |                    |                    |                    |
| 1,1-Dichloroethane               | 81                     |                         | 700                       | 0.2 J              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,2-Dichlorobenzene              | 37                     | 600                     | 620                       | 0.17 J             | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,2-Dichloropropane              | 0.16                   | 5                       | 0.56                      | 0.67               | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,4-Dichlorobenzene              | 0.5                    | 75                      | 75                        | 1                  | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| 2-Hexanone                       |                        |                         |                           | 0.52 J             | 5 U                | 5 U                | 5 U                | 5 U                | 5 U                |
| Benzene                          | 0.35                   | 5                       | 1                         | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Bromoform                        | 8.5                    |                         | 0.19                      | 0.5 U              | 0.5 U              | 1.9 U              | 0.5 U              | 1.9 U              | 0.5 U              |
| Carbon Disulfide                 | 100                    |                         | 700                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 1.6                |
| Chlorobenzene                    | 11                     | 100                     | 50                        | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Chloroform                       | 0.17                   |                         | 0.19                      | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.32 J             |
| cis-1,2-Dichloroethene           | 6.1                    | 70                      | 70                        | 0.5 U              | 0.5 UJ             | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Methyl Acetate                   | 610                    |                         |                           | 0.91               | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Methyl Tert-Butyl Ether          | 11                     |                         | 200                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.26 J             | 0.39 J             | 0.5 U              |
| Methylcyclohexane                | 520                    |                         |                           | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |
| Tetrachloroethene                | 0.1                    | 5                       | 0.7                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              | 0.1 J              |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-06<br>May-04 | SS-PW-08<br>Oct-02 | SS-PW-08<br>May-04 | SS-PW-09<br>Oct-02 | SS-PW-09<br>Mar-03 |
|-----------------------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Inorganic Compounds (µg/L)</b> |                        |                         |                           |                    |                    |                    |                    |                    |
| Aluminum                          | 3600                   | 200                     |                           | 110 J              | 200 U              | 200                | 200 U              | 100 U              |
| Arsenic                           | 0.045                  | 10                      | 10                        | 1 U                | 0.5 U              | 1 U                | 0.5 U              | 0.5 U              |
| Barium                            | 260                    | 2000                    | 2000                      | 30                 | 14                 | 15                 | 2.5 U              | 5 U                |
| Beryllium                         | 7.3                    | 4                       |                           | 1 U                | 1.5 U              | 1 U                | 1.5 U              | 3 U                |
| Calcium                           |                        |                         |                           | 2900 J             | 6600               | 6300               | 25000              | 22000 A            |
| Cobalt                            | 73                     |                         |                           | 0.27 J             | 2.5 U              | 1 U                | 2.5 U              | 5 U                |
| Copper                            | 150                    | 1300                    | 1000                      | 21 J               | 15                 | 70 J               | 270                | 40 A               |
| Iron                              | 1100                   | 300                     | 300                       | 37 J               | 50 U               | 100 U              | 50 U               | 50 U               |
| Lead                              | 15                     | 15                      | 15                        | 1.3 J              | 1.6                | 7.5 J              | 50                 | 6 A                |
| Magnesium                         |                        |                         |                           | 660 J              | 1400               | 1600 J             | 1800               | 1900 A             |
| Manganese                         | 88                     | 50                      | 50                        | 13                 | 5 U                | 3.6                | 5 U                | 10 U               |
| Mercury                           | 0.36                   | 2                       | 1.1                       | 0.2 U              | 0.2 U              | 0.2 U              | 0.2 U              | 0.2 U              |
| Nickel                            | 73                     |                         | 100                       | 2.9                | 5 U                | 0.73 UJ            | 5 U                | 10 U               |
| Potassium                         |                        |                         |                           | 840 J              | 1700               | 1400 J             | 1000 U             | 2000 U             |
| Selenium                          | 18                     | 50                      | 50                        | 5 U                | 1 U                | 5 U                | 1 U                | 1 U                |
| Silver                            | 18                     | 100                     | 18                        | 1 U                | 10 U               | 1 U                | 10 U               | 5 U                |
| Sodium                            |                        |                         |                           | 910 J              | 4900               | 5800               | 4800               | 5100 A             |
| STRONTIUM                         | 2200                   |                         |                           |                    | 36                 |                    | 28                 | 26 A               |
| Vanadium                          | 3.6                    |                         |                           | 1 U                | 2.5 U              | 1.8                | 2.5 U              | 5 U                |
| YTTRIUM                           |                        |                         |                           |                    | 1.5 U              |                    | 1.5 U              | 3 U                |
| Zinc                              | 1100                   | 5000                    | 2100                      | 20 J               | 620                | 200 J              | 21                 | 56 A               |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-06<br>May-04 | SS-PW-08<br>Oct-02 | SS-PW-08<br>May-04 | SS-PW-09<br>Oct-02 | SS-PW-09<br>Mar-03 |
|----------------------------------|------------------------|-------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Pesticides/PCB (µg/L)</b>     |                        |                         |                           |                    |                    |                    |                    |                    |
| alpha-BHC                        | <b>0.011</b>           |                         | 0.019                     | 0.01 U             | 0.011 U            | 0.01 U             | 0.01 U             |                    |
| delta-BHC                        |                        |                         | <b>0.019</b>              | 0.01 U             | 0.011 U            | 0.01 U             | 0.01 U             |                    |
| Endosulfan II                    |                        |                         | <b>42</b>                 | 0.02 U             | 0.022 U            | 0.02 U             | 0.02 U             |                    |
| Endrin aldehyde                  |                        |                         |                           | 0.02 U             | 0.022 U            | 0.01 U             | 0.02 U             |                    |
| Endrin ketone                    |                        |                         |                           | 0.02 U             | 0.022 U            | 0.01 NJ            | 0.02 U             |                    |
| gamma-Chlordane                  | <b>0.19</b>            |                         |                           | 0.01 U             | 0.011 U            | 0.011 N            | 0.01 U             |                    |
| Heptachlor epoxide               | 0.0074                 | 0.2                     | <b>0.004</b>              | 0.01 U             | 0.011 U            | 0.01 U             | 0.01 U             |                    |
| <b>Volatile Compounds (µg/L)</b> |                        |                         |                           |                    |                    |                    |                    |                    |
| 1,1-Dichloroethane               | <b>81</b>              |                         | 700                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| 1,2-Dichlorobenzene              | <b>37</b>              | 600                     | 620                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| 1,2-Dichloropropane              | <b>0.16</b>            | 5                       | 0.56                      | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| 1,4-Dichlorobenzene              | <b>0.5</b>             | 75                      | 75                        | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| 2-Hexanone                       |                        |                         |                           | 5 U                | 5 U                | 5 U                | 5 U                |                    |
| Benzene                          | <b>0.35</b>            | 5                       | 1                         | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Bromoform                        | 8.5                    |                         | <b>0.19</b>               | 1.9 U              | 0.5 U              | <b>1.6 U</b>       | 0.5 U              |                    |
| Carbon Disulfide                 | <b>100</b>             |                         | 700                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Chlorobenzene                    | <b>11</b>              | 100                     | 50                        | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Chloroform                       | <b>0.17</b>            |                         | 0.19                      | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| cis-1,2-Dichloroethene           | <b>6.1</b>             | 70                      | 70                        | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Methyl Acetate                   | <b>610</b>             |                         |                           | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Methyl Tert-Butyl Ether          | <b>11</b>              |                         | 200                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Methylcyclohexane                | <b>520</b>             |                         |                           | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |
| Tetrachloroethene                | <b>0.1</b>             | 5                       | 0.7                       | 0.5 U              | 0.5 U              | 0.5 U              | 0.5 U              |                    |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-09<br>Apr-03 |
|-----------------------------------|------------------------|-------------------------|---------------------------|--------------------|
| <b>Inorganic Compounds (µg/L)</b> |                        |                         |                           |                    |
| Aluminum                          | 3600                   | 200                     |                           | 100 U              |
| Arsenic                           | 0.045                  | 10                      | 10                        | 1 U                |
| Barium                            | 260                    | 2000                    | 2000                      | 5 U                |
| Beryllium                         | 7.3                    | 4                       |                           | 3 U                |
| Calcium                           |                        |                         |                           | 21000 A            |
| Cobalt                            | 73                     |                         |                           | 5 U                |
| Copper                            | 150                    | 1300                    | 1000                      | 64 AJ              |
| Iron                              | 1100                   | 300                     | 300                       | 50 U               |
| Lead                              | 15                     | 15                      | 15                        | 14 A               |
| Magnesium                         |                        |                         |                           | 1900 A             |
| Manganese                         | 88                     | 50                      | 50                        | 10 U               |
| Mercury                           | 0.36                   | 2                       | 1.1                       | 0.2 U              |
| Nickel                            | 73                     |                         | 100                       | 10 U               |
| Potassium                         |                        |                         |                           | 2000 U             |
| Selenium                          | 18                     | 50                      | 50                        | 2 U                |
| Silver                            | 18                     | 100                     | 18                        | 5 U                |
| Sodium                            |                        |                         |                           | 5000 A             |
| STRONTIUM                         | 2200                   |                         |                           | 26 A               |
| Vanadium                          | 3.6                    |                         |                           | 5 U                |
| YTTRIUM                           |                        |                         |                           | 3 U                |
| Zinc                              | 1100                   | 5000                    | 2100                      | 61 A               |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-09<br>Apr-03 |
|----------------------------------|------------------------|-------------------------|---------------------------|--------------------|
| <b>Pesticides/PCB (µg/L)</b>     |                        |                         |                           |                    |
| alpha-BHC                        | 0.011                  |                         | 0.019                     |                    |
| delta-BHC                        |                        |                         | 0.019                     |                    |
| Endosulfan II                    |                        |                         | 42                        |                    |
| Endrin aldehyde                  |                        |                         |                           |                    |
| Endrin ketone                    |                        |                         |                           |                    |
| gamma-Chlordane                  | 0.19                   |                         |                           |                    |
| Heptachlor epoxide               | 0.0074                 | 0.2                     | 0.004                     |                    |
| <b>Volatile Compounds (µg/L)</b> |                        |                         |                           |                    |
| 1,1-Dichloroethane               | 81                     |                         | 700                       |                    |
| 1,2-Dichlorobenzene              | 37                     | 600                     | 620                       |                    |
| 1,2-Dichloropropane              | 0.16                   | 5                       | 0.56                      |                    |
| 1,4-Dichlorobenzene              | 0.5                    | 75                      | 75                        |                    |
| 2-Hexanone                       |                        |                         |                           |                    |
| Benzene                          | 0.35                   | 5                       | 1                         |                    |
| Bromoform                        | 8.5                    |                         | 0.19                      |                    |
| Carbon Disulfide                 | 100                    |                         | 700                       |                    |
| Chlorobenzene                    | 11                     | 100                     | 50                        |                    |
| Chloroform                       | 0.17                   |                         | 0.19                      |                    |
| cis-1,2-Dichloroethene           | 6.1                    | 70                      | 70                        |                    |
| Methyl Acetate                   | 610                    |                         |                           |                    |
| Methyl Tert-Butyl Ether          | 11                     |                         | 200                       |                    |
| Methylcyclohexane                | 520                    |                         |                           |                    |
| Tetrachloroethene                | 0.1                    | 5                       | 0.7                       |                    |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-09<br>Apr-03<br>Filtered Tap | SS-PW-09<br>Apr-03<br>Unfiltered Tap | SS-PW-09<br>May-04 | SS-PW-09<br>May-04 | SS-PW-10<br>May-04 |
|-----------------------------------|------------------------|-------------------------|---------------------------|------------------------------------|--------------------------------------|--------------------|--------------------|--------------------|
| <b>Inorganic Compounds (µg/L)</b> |                        |                         |                           |                                    |                                      |                    |                    |                    |
| Aluminum                          | 3600                   | 200                     |                           | 100 U                              | 100 U                                | 200 U              | 200 U              | 200 U              |
| Arsenic                           | 0.045                  | 10                      | 10                        | 1 U                                | 1 U                                  | 1 U                | 1 U                | 1 U                |
| Barium                            | 260                    | 2000                    | 2000                      | 5 U                                | 5 U                                  | 28                 | 27                 | 12                 |
| Beryllium                         | 7.3                    | 4                       |                           | 3 U                                | 3 U                                  | 1 U                | 1 U                | 1 U                |
| Calcium                           |                        |                         |                           | 20000                              | 21000                                | 23000              | 25000              | 4300 J             |
| Cobalt                            | 73                     |                         |                           | 5 U                                | 5 U                                  | 1 U                | 1 U                | 1 U                |
| Copper                            | 150                    | 1300                    | 1000                      | 40                                 | 36                                   | 150 J              | 60 J               | 37 J               |
| Iron                              | 1100                   | 300                     | 300                       | 50 U                               | 50 U                                 | 100 U              | 100 U              | 130                |
| Lead                              | 15                     | 15                      | 15                        | 2.3                                | 1 U                                  | 20 J               | 8.3 J              | 140 J              |
| Magnesium                         |                        |                         |                           | 1800                               | 1900                                 | 1300 J             | 1300 J             | 870 J              |
| Manganese                         | 88                     | 50                      | 50                        | 10 U                               | 10 U                                 | 5.8                | 5.7                | 7.1                |
| Mercury                           | 0.36                   | 2                       | 1.1                       | 0.2 U                              | 0.2 U                                | 0.2 U              | 0.2 U              | 0.2 U              |
| Nickel                            | 73                     |                         | 100                       | 10 U                               | 10 U                                 | 0.9 UJ             | 0.86 UJ            | 0.92 UJ            |
| Potassium                         |                        |                         |                           | 2000 U                             | 2000 U                               | 1000 J             | 1100 J             | 1100 J             |
| Selenium                          | 18                     | 50                      | 50                        | 2 U                                | 2 U                                  | 5 U                | 5 U                | 0.57 R             |
| Silver                            | 18                     | 100                     | 18                        | 5 U                                | 5 U                                  | 1 U                | 1 U                | 1 U                |
| Sodium                            |                        |                         |                           | 4700                               | 5000                                 | 3300 J             | 3200 J             | 5600               |
| STRONTIUM                         | 2200                   |                         |                           | 24                                 | 25                                   |                    |                    |                    |
| Vanadium                          | 3.6                    |                         |                           | 5 U                                | 5 U                                  | 1 U                | 1 U                | 1 U                |
| YTTRIUM                           |                        |                         |                           | 3 U                                | 3 U                                  |                    |                    |                    |
| Zinc                              | 1100                   | 5000                    | 2100                      | 250                                | 130                                  | 42 J               | 37 J               | 3400 J             |

Table 5-5  
Potable Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | Federal<br>MCL/<br>SMCL | North<br>Carolina<br>GWQS | SS-PW-09<br>Apr-03<br>Filtered Tap | SS-PW-09<br>Apr-03<br>Unfiltered Tap | SS-PW-09<br>May-04 | SS-PW-09<br>May-04 | SS-PW-10<br>May-04 |
|----------------------------------|------------------------|-------------------------|---------------------------|------------------------------------|--------------------------------------|--------------------|--------------------|--------------------|
| <b>Pesticides/PCB (µg/L)</b>     |                        |                         |                           |                                    |                                      |                    |                    |                    |
| alpha-BHC                        | 0.011                  |                         | 0.019                     |                                    |                                      | 0.01 U             | 0.01 U             | 0.01 U             |
| delta-BHC                        |                        |                         | 0.019                     |                                    |                                      | 0.01 U             | 0.01 U             | 0.01 U             |
| Endosulfan II                    |                        |                         | 42                        |                                    |                                      | 0.02 U             | 0.02 U             | 0.02 U             |
| Endrin aldehyde                  |                        |                         |                           |                                    |                                      | 0.02 U             | 0.02 U             | 0.02 U             |
| Endrin ketone                    |                        |                         |                           |                                    |                                      | 0.02 U             | 0.02 U             | 0.02 U             |
| gamma-Chlordane                  | 0.19                   |                         |                           |                                    |                                      | 0.01 U             | 0.01 U             | 0.01 U             |
| Heptachlor epoxide               | 0.0074                 | 0.2                     | 0.004                     |                                    |                                      | 0.01 U             | 0.01 U             | 0.01 U             |
| <b>Volatile Compounds (µg/L)</b> |                        |                         |                           |                                    |                                      |                    |                    |                    |
| 1,1-Dichloroethane               | 81                     |                         | 700                       |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,2-Dichlorobenzene              | 37                     | 600                     | 620                       |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,2-Dichloropropane              | 0.16                   | 5                       | 0.56                      |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| 1,4-Dichlorobenzene              | 0.5                    | 75                      | 75                        |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| 2-Hexanone                       |                        |                         |                           |                                    |                                      | 5 U                | 5 U                | 5 U                |
| Benzene                          | 0.35                   | 5                       | 1                         |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Bromoform                        | 8.5                    |                         | 0.19                      |                                    |                                      | 1.9 U              | 1.9 U              | 1.9 U              |
| Carbon Disulfide                 | 100                    |                         | 700                       |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Chlorobenzene                    | 11                     | 100                     | 50                        |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Chloroform                       | 0.17                   |                         | 0.19                      |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| cis-1,2-Dichloroethene           | 6.1                    | 70                      | 70                        |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Methyl Acetate                   | 610                    |                         |                           |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Methyl Tert-Butyl Ether          | 11                     |                         | 200                       |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Methylcyclohexane                | 520                    |                         |                           |                                    |                                      | 0.5 U              | 0.5 U              | 0.5 U              |
| Tetrachloroethene                | 0.1                    | 5                       | 0.7                       |                                    |                                      | 0.5 U              | 0.5 U              | 0.21 U             |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>0-6" bls | SS-SF/SB-01<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-03<br>Oct-02<br>0-12" bls |
|------------------------------------|------------------------|--------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                     |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 14000                               | 13000                              | 20000                              | 19000                              | 28000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.4 UR                              | 1.8 UJ                             | 1 UJ                               | 1.6 UJ                             | 2.7 UJ                             |
| Arsenic                            | 0.39                   | 4.4                      | 0.5 R                               | 1.2 U                              | 2.7 J                              | 2.5                                | 3.1                                |
| Barium                             | 540                    |                          | 24 J                                | 25                                 | 20                                 | 19                                 | 150                                |
| Beryllium                          | 15                     | 30                       | 0.15 J                              | 0.39                               | 0.34                               | 0.38                               | 1.5                                |
| Cadmium                            | 3.7                    | 7.4                      | 0.61 U                              | 0.17 U                             | 0.18 U                             | 0.19 U                             | 0.2 U                              |
| Calcium                            |                        |                          | 160 J                               | 780                                | 880                                | 950                                | 390                                |
| Chromium                           | 30                     | 30                       | 7.8 J                               | 13                                 | 16                                 | 18                                 | 28                                 |
| Cobalt                             | 900                    |                          | 0.58 J                              | 1.7 U                              | 1.8 U                              | 1.8 U                              | 5.6                                |
| Copper                             | 310                    | 620                      | 2.6 J                               | 7.1 J                              | 6.5 J                              | 6.5 J                              | 35 J                               |
| Iron                               | 2300                   |                          | 10000                               | 22000                              | 29000                              | 33000                              | 27000                              |
| Lead                               | 400                    | 400                      | 10 J                                | 24                                 | 9.4                                | 9.5                                | 30                                 |
| Magnesium                          |                        |                          | 260 J                               | 500                                | 410                                | 400                                | 2000                               |
| Manganese                          | 180                    | 360                      | 54                                  | 100                                | 70                                 | 89                                 | 140                                |
| Mercury                            | 0.61                   | 4.6                      | 0.12 U                              | 0.06 U                             | 0.07 U                             | 0.09 U                             | 0.12 U                             |
| Nickel                             | 160                    | 320                      | 2.4 UJ                              | 3.9                                | 2.3                                | 1.9                                | 11                                 |
| Potassium                          |                        |                          | 290 J                               | 460                                | 540                                | 540                                | 1500                               |
| Selenium                           | 39                     | 78                       | 4.3 U                               | 1.2 R                              | 1.6                                | 2.2                                | 1.9                                |
| Silver                             | 39                     | 78                       | 1.2 U                               | 0.39 R                             | 0.47 R                             | 0.65 R                             | 0.46                               |
| Sodium                             |                        |                          | 71 UJ                               | 160                                | 140                                | 180                                | 130 U                              |
| Thallium                           | 0.52                   | 1.04                     | 3.1 U                               | 1.5 U                              | 1.6 U                              | 1.6 U                              | 1.8 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 26                                  | 58                                 | 75                                 | 85                                 | 76                                 |
| Zinc                               | 2300                   | 4600                     | 8.3 J                               | 19 J                               | 14 J                               | 14 J                               | 140 J                              |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>0-6" bls | SS-SF/SB-01<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-03<br>Oct-02<br>0-12" bls |
|------------------------------------------------------|------------------------|--------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                     |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          | 2.4 J                               | 1.8 U                              |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          | 24                                  | 24                                 |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          | 0.58 U                              | 0.4 U                              |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.3 U                               | 0.35 U                             |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.4 U                               | 0.44 U                             |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.3 U                               | 0.3 U                              |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.71 J                              | 0.45 U                             |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.77 J                              | 0.43 U                             |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.16 U                              | 0.18 U                             |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          | 0.3 J                               | 0.38 U                             |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.38 J                              | 0.37 U                             |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.37 U                              | 0.21 U                             |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        | 0.2 U                               | 1.4 U                              |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          | 0.36 J                              | 0.2 U                              |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                     | 48 J                               |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          | 49 J                                |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                     | 2.3 J                              |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          | 2.4 J                               |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          | 4.1 J                               |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                     | 2.4 J                              |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          | 2.5 J                               |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                     | 0.39 J                             |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          | 2700                                | 4500                               |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          | 4.1 J                               | 4.2 J                              |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          | 1.2 J                               |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                     | 0.38 UJ                            |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                     | 0.49 J                             |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          | 1.6 J                               |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          | 1.8 J                               |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          | 1.4 J                               |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          | 1.6 J                               |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                     | 4.7                                |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          | 0.2 UJ                              |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          | 0.36 J                              |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                     | 0.2 UJ                             |                                    |                                    |                                    |

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Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>0-6" bls | SS-SF/SB-01<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-03<br>Oct-02<br>0-12" bls |
|-----------------------------------------------|------------------------|--------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                     |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          | 440 NJ                              |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          | 1000 NJ                             |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          | 250 NJ                              |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          | 120 NJ                              |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          | 240 NJ                              |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Acetophenone                                  |                        | 98                       | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Benzaldehyde                                  | 610000                 |                          | 370 UJ                              | 70 J                               | 450 U                              | 470 U                              | 710 J                              |
| Benzo(a)anthracene                            | 620                    | 620                      | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Benzo(a)pyrene                                | 62                     | 62                       | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Benzo(b)fluoranthene                          | 620                    | 620                      | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 59 J                               |
| Benzo(g,h,i)perylene                          |                        |                          | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                     |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 780                                |
| Butylbenzylphthalate                          | 1200000                | 2400000                  | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Chrysene                                      | 62000                  | 62000                    | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| D:C-FRIEDOLEAN-8-EN-3-ONE                     |                        |                          | 3300 NJ                             |                                    |                                    |                                    |                                    |
| D-FRIEDOLEAN-14-EN-3-ONE                      |                        |                          | 480 NJ                              |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          | 2400 NJ                             |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| HEXADECANOIC ACID                             |                        |                          |                                     | 390 NJ                             | 7600 NJ                            | 5400 NJ                            |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| MIREX                                         | 270                    |                          |                                     |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                     |                                    | 530 NJ                             | 560 NJ                             |                                    |
| OCTADECENAL                                   |                        |                          | 160 NJ                              |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| Pyrene                                        | 230000                 | 460000                   | 370 U                               | 410 U                              | 450 U                              | 470 U                              | 480 U                              |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                     |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          | 200 NJ                              |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                     |                                    | 290 NJ                             | 190 NJ                             |                                    |

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Surface Soil Analytical Results  
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|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>0-6" bls | SS-SF/SB-01<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-02<br>Oct-02<br>0-12" bls | SS-SF/SB-03<br>Oct-02<br>0-12" bls |
|-------------------------------------------|------------------------|--------------------------|-------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                     |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     | 3.8 U                               | 4.1 U                              | 4.4 U                              | 4.6 U                              | 4.8 U                              |
| 4,4'-DDT                                  | 1700                   | 1700                     | 3.8 U                               | 4.1 U                              | 4.4 U                              | 4.6 U                              | 4.8 U                              |
| alpha-Chlordane                           |                        |                          | 1.9 U                               | 2.1 U                              | 2.3 U                              | 2.4 U                              | 2.6 U                              |
| Dieldrin                                  | 30                     | 30                       | 3.8 U                               | 4.1 U                              | 4.4 U                              | 4.6 U                              | 4.8 U                              |
| Endosulfan I                              |                        |                          | 1.9 U                               | 2.1 U                              | 2.3 U                              | 2.4 U                              | 2.5 U                              |
| Endosulfan sulfate                        |                        |                          | 3.8 U                               | 4.1 U                              | 4.4 U                              | 4.6 U                              | 4.8 U                              |
| gamma-Chlordane                           |                        |                          | 1.9 U                               | 2.1 U                              | 2.3 U                              | 2.4 U                              | 2.5 U                              |
| Heptachlor                                | 110                    | 110                      | 1.9 U                               | 2.1 U                              | 2.3 U                              | 2.4 U                              | 2.5 U                              |
| Heptachlor epoxide                        | 53                     | 53                       | 1.9 U                               | 2.7                                | 1.8 JN                             | 2.4 U                              | 2.5 U                              |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                     |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     | 11 U                                | 12 U                               | 12 U                               | 13 U                               | 15 U                               |
| 2-Butanone                                | 2200000                | 4400000                  | 11 U                                | 12 U                               | 12 U                               | 13 U                               | 22                                 |
| Acetone                                   | 1400000                | 2800000                  | 17                                  | 12 U                               | 61 U                               | 26 U                               | 270 J                              |
| Benzene                                   | 640                    | 640                      | 11 U                                | 12 U                               | 12 U                               | 13 U                               | 15 U                               |
| Methyl Acetate                            | 2200000                |                          | 11 U                                | 12 U                               | 12 U                               | 8 J                                | 30                                 |
| Tetrachloroethene                         | 480                    | 480                      | 2 J                                 | 12 U                               | 12 U                               | 13 U                               | 15 U                               |
| Toluene                                   | 520000                 | 132000                   | 11 U                                | 12 U                               | 12 U                               | 13 U                               | 15 U                               |
| Xylenes (total)                           | 27000                  | 54000                    | 11 U                                | 12 U                               | 12 U                               | 13 U                               | 15 U                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>0-12" bls | SS-SF/SB-05<br>Oct-02<br>0-12" bls | SS-SF/SB-06<br>Oct-02<br>0-12" bls | SS-SF/SB-07<br>Oct-02<br>0-12" bls | SS-SF/SB-08<br>Oct-02<br>0-12" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 5100                               | 18000                              | 28000                              | 22000                              | 18000                              |
| Antimony                           | 3.1                    | 6.2                      | 0.88 UJ                            | 1.6 U                              | 3.6 UJ                             | 1.3 R                              | 0.95 UJ                            |
| Arsenic                            | 0.39                   | 4.4                      | 2.4                                | 1.2 U                              | 1.8 R                              | 1.2 R                              | 2.3 R                              |
| Barium                             | 540                    |                          | 38                                 | 58                                 | 250                                | 170                                | 130                                |
| Beryllium                          | 15                     | 30                       | 0.25                               | 0.9                                | 2.1                                | 0.51 U                             | 0.52 U                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.15 U                             | 0.17 U                             | 0.55                               | 0.22 R                             | 1.9                                |
| Calcium                            |                        |                          | 220                                | 530                                | 1100                               | 150                                | 2000                               |
| Chromium                           | 30                     | 30                       | 6.2                                | 9.2                                | 40                                 | 16                                 | 34                                 |
| Cobalt                             | 900                    |                          | 1.5 U                              | 4.5                                | 9.7                                | 12                                 | 8.1                                |
| Copper                             | 310                    | 620                      | 3.2 J                              | 8.4 J                              | 100 J                              | 14 J                               | 63 J                               |
| Iron                               | 2300                   |                          | 4500                               | 18000                              | 24000                              | 22000                              | 19000                              |
| Lead                               | 400                    | 400                      | 5.6                                | 12                                 | 65                                 | 9.2                                | 88                                 |
| Magnesium                          |                        |                          | 370                                | 2200                               | 6100                               | 3800                               | 3200                               |
| Manganese                          | 180                    | 360                      | 78                                 | 180                                | 310                                | 190                                | 210                                |
| Mercury                            | 0.61                   | 4.6                      | 0.06 U                             | 0.07 U                             | 0.22                               | 0.06 U                             | 0.49                               |
| Nickel                             | 160                    | 320                      | 1.6                                | 6.4                                | 52                                 | 8.1                                | 34                                 |
| Potassium                          |                        |                          | 250                                | 2000                               | 4400                               | 3600                               | 2400                               |
| Selenium                           | 39                     | 78                       | 0.95 U                             | 1.3 J                              | 1 U                                | 0.83 UJ                            | 0.81 UJ                            |
| Silver                             | 39                     | 78                       | 0.29 U                             | 0.35                               | 1.7                                | 0.22 U                             | 0.21 U                             |
| Sodium                             |                        |                          | 120                                | 110 U                              | 110 U                              | 910                                | 850                                |
| Thallium                           | 0.52                   | 1.04                     | 1.3 U                              | 1.5 U                              | 1.4 U                              | 1.6 R                              | 1.4 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 11                                 | 45                                 | 50                                 | 51                                 | 38                                 |
| Zinc                               | 2300                   | 4600                     | 23 J                               | 36 J                               | 230 J                              | 270 J                              | 220 J                              |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>0-12" bls | SS-SF/SB-05<br>Oct-02<br>0-12" bls | SS-SF/SB-06<br>Oct-02<br>0-12" bls | SS-SF/SB-07<br>Oct-02<br>0-12" bls | SS-SF/SB-08<br>Oct-02<br>0-12" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          | 3.6 U                              |                                    | 16 J                               |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          | 29                                 |                                    | 210                                |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          | 0.25 U                             |                                    | 0.61 U                             |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.57 J                             |                                    | 2.3 U                              |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.38 U                             |                                    | 2.1 U                              |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.22 U                             |                                    | 1.3 U                              |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.39 J                             |                                    | 26                                 |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 1.3 J                              |                                    | 10 J                               |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.18 U                             |                                    | 0.33 U                             |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          | 0.58 U                             |                                    | 1.6 U                              |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.3 U                              |                                    | 0.39 U                             |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.2 U                              |                                    | 0.34 U                             |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        | 0.25 U                             |                                    | 0.33 U                             |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          | 0.14 U                             |                                    | 1.2 U                              |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          | 53 J                               |                                    | 460 J                              |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          | 6.1 J                              |                                    | 40 J                               |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          | 2.7 J                              |                                    | 220 J                              |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          | 2.9 J                              |                                    | 34 J                               |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          | 400                                |                                    | 1900                               |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          | 7.5 J                              |                                    | 33 J                               |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          | 0.28 UJ                            |                                    | 1.8 J                              |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          | 0.18 UJ                            |                                    | 17 J                               |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          | 0.92 J                             |                                    | 7.9 J                              |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          | 0.14 UJ                            |                                    | 2.5 J                              |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>0-12" bls | SS-SF/SB-05<br>Oct-02<br>0-12" bls | SS-SF/SB-06<br>Oct-02<br>0-12" bls | SS-SF/SB-07<br>Oct-02<br>0-12" bls | SS-SF/SB-08<br>Oct-02<br>0-12" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    | 370 U                              | 390 U                              | 610                                | 400 U                              | 410 U                              |
| Acetophenone                                  |                        | 98                       | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 55 J                               |
| Benzaldehyde                                  | 610000                 |                          | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 52 J                               |
| Benzo(a)anthracene                            | 620                    | 620                      | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 60 J                               |
| Benzo(a)pyrene                                | 62                     | 62                       | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 190 J                              |
| Benzo(b)fluoranthene                          | 620                    | 620                      | 370 U                              | 390 U                              | 42 J                               | 400 U                              | 210 J                              |
| Benzo(g,h,i)perylene                          |                        |                          | 370 U                              | 390 U                              | 57 J                               | 400 U                              | 400 J                              |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 130 J                              |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    | 370 U                              | 390 U                              | 1200                               | 4300                               | 880                                |
| Butylbenzylphthalate                          | 1200000                | 2400000                  | 370 U                              | 390 U                              | 700 J                              | 400 U                              | 470                                |
| Chrysene                                      | 62000                  | 62000                    | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 160 J                              |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 130 J                              |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      | 370 U                              | 390 U                              | 47 J                               | 400 U                              | 360 J                              |
| MIREX                                         | 270                    |                          |                                    | 92 NJ                              |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    | 280 NJ                             |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 67 J                               |
| Pyrene                                        | 230000                 | 460000                   | 370 U                              | 390 U                              | 400 U                              | 400 U                              | 130 J                              |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    | 380 NJ                             |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>0-12" bls | SS-SF/SB-05<br>Oct-02<br>0-12" bls | SS-SF/SB-06<br>Oct-02<br>0-12" bls | SS-SF/SB-07<br>Oct-02<br>0-12" bls | SS-SF/SB-08<br>Oct-02<br>0-12" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     | 3.7 U                              | 3.9 U                              | 1.3 J                              | 15 U                               | 4.1 U                              |
| 4,4'-DDT                                  | 1700                   | 1700                     | 3.7 U                              | 3.9 U                              | 4 U                                | 39 N                               | 4.1 U                              |
| alpha-Chlordane                           |                        |                          | 1.9 U                              | 4.9 U                              | 8.2 U                              | 4.2 U                              | 7.4 U                              |
| Dieldrin                                  | 30                     | 30                       | 3.7 U                              | 3.9 U                              | 4 U                                | 9.7 N                              | 4.1 U                              |
| Endosulfan I                              |                        |                          | 1.9 U                              | 2 U                                | 2.1 U                              | 6 N                                | 2.1 U                              |
| Endosulfan sulfate                        |                        |                          | 3.7 U                              | 3.9 U                              | 4 U                                | 13 N                               | 4.1 U                              |
| gamma-Chlordane                           |                        |                          | 1.9 U                              | 3.9                                | 5.5 N                              | 2.1 U                              | 5                                  |
| Heptachlor                                | 110                    | 110                      | 1.9 U                              | 2 U                                | 1.6 JN                             | 2.1 U                              | 2.1 U                              |
| Heptachlor epoxide                        | 53                     | 53                       | 2.5 U                              | 2 U                                | 2.1 U                              | 5.3 U                              | 2.1 U                              |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     | 10 U                               | 10 U                               | 13 U                               | 10 U                               | 3 J                                |
| 2-Butanone                                | 2200000                | 4400000                  | 10 U                               | 10 U                               | 16                                 | 10 U                               | 11 U                               |
| Acetone                                   | 1400000                | 2800000                  | 60 U                               | 29 U                               | 210 J                              | 20 U                               | 63 J                               |
| Benzene                                   | 640                    | 640                      | 10 U                               | 10 U                               | 13 U                               | 10 U                               | 11 U                               |
| Methyl Acetate                            | 2200000                |                          | 11                                 | 22                                 | 130                                | 3 J                                | 3 J                                |
| Tetrachloroethene                         | 480                    | 480                      | 10 U                               | 10 U                               | 13 U                               | 10 U                               | 11 U                               |
| Toluene                                   | 520000                 | 132000                   | 10 U                               | 10 U                               | 13 U                               | 10 U                               | 11 U                               |
| Xylenes (total)                           | 27000                  | 54000                    | 10 U                               | 10 U                               | 13 U                               | 10 U                               | 1 J                                |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-09<br>Oct-02<br>0-12" bls | SS-SF/SB-12<br>Oct-02<br>0-12" bls | SS-SF/SB-13<br>Oct-02<br>0-12" bls | SS-SF-14<br>May-04<br>0-12" bls | SS-SF-15<br>May-04<br>0-12" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------|---------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                 |                                 |
| Aluminum                           | 7600                   |                          | 31000                              | 10000                              | 37000                              | 26000 J                         | 14000 J                         |
| Antimony                           | 3.1                    | 6.2                      | 1.5 R                              | 0.99 J                             | 0.96 UJ                            | 5.7 UR                          | 5.4 UR                          |
| Arsenic                            | 0.39                   | 4.4                      | 2.6                                | 0.91 U                             | 1.3                                | 0.95 U                          | 0.89 U                          |
| Barium                             | 540                    |                          | 66                                 | 29                                 | 92                                 | 79 J                            | 100 J                           |
| Beryllium                          | 15                     | 30                       | 0.4 U                              | 0.38 U                             | 0.64 U                             | 0.74                            | 0.54                            |
| Cadmium                            | 3.7                    | 7.4                      | 0.53 R                             | 0.15 U                             | 0.17 U                             | 0.95                            | 0.76                            |
| Calcium                            |                        |                          | 340                                | 160                                | 210                                | 1100                            | 1500                            |
| Chromium                           | 30                     | 30                       | 18                                 | 9.7                                | 23                                 | 15 J                            | 21 J                            |
| Cobalt                             | 900                    |                          | 6.7                                | 2.5                                | 9.7                                | 3.4 UJ                          | 3.3 UJ                          |
| Copper                             | 310                    | 620                      | 11 J                               | 8.6 J                              | 2.2 J                              | 43                              | 44                              |
| Iron                               | 2300                   |                          | 31000                              | 17000                              | 21000                              | 27000 J                         | 19000 J                         |
| Lead                               | 400                    | 400                      | 11                                 | 9.2                                | 8                                  | 21 J                            | 26 J                            |
| Magnesium                          |                        |                          | 2400                               | 680                                | 7300                               | 1400                            | 1400                            |
| Manganese                          | 180                    | 360                      | 140                                | 86                                 | 290                                | 110 J                           | 120 J                           |
| Mercury                            | 0.61                   | 4.6                      | 0.09 U                             | 0.06 U                             | 0.06 U                             | 0.11 UJ                         | 0.16                            |
| Nickel                             | 160                    | 320                      | 8                                  | 2.1                                | 17                                 | 8.3 J                           | 6.6 J                           |
| Potassium                          |                        |                          | 2100                               | 1200                               | 5100                               | 1400                            | 910                             |
| Selenium                           | 39                     | 78                       | 0.82 UR                            | 0.84 UJ                            | 1 U                                | 3.3 U                           | 3.1 U                           |
| Silver                             | 39                     | 78                       | 0.36                               | 0.22 U                             | 0.31 U                             | 0.45 UJ                         | 0.12 UJ                         |
| Sodium                             |                        |                          | 960                                | 640                                | 110 U                              | 120 J                           | 190 J                           |
| Thallium                           | 0.52                   | 1.04                     | 3.6 J                              | 2.2                                | 1 U                                | 2.4 U                           | 2.2 U                           |
| Vanadium                           | 7.8                    | 15.6                     | 73                                 | 44                                 | 59                                 | 63 J                            | 39 J                            |
| Zinc                               | 2300                   | 4600                     | 45 J                               | 14 J                               | 38 J                               | 140 J                           | 120 J                           |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-09<br>Oct-02<br>0-12" bls | SS-SF/SB-12<br>Oct-02<br>0-12" bls | SS-SF/SB-13<br>Oct-02<br>0-12" bls | SS-SF-14<br>May-04<br>0-12" bls | SS-SF-15<br>May-04<br>0-12" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------|---------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 15 U                            |                                 |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    | 73                              |                                 |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 7.2 UR                          |                                 |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 1 U                             |                                 |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 2.4 U                           |                                 |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 5.2 U                           |                                 |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 6.8 U                           |                                 |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 2.9 J                           |                                 |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.49 U                          |                                 |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    | 1.4 U                           |                                 |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.82 U                          |                                 |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 2.4 U                           |                                 |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    | 1.1 U                           |                                 |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    | 0.77 U                          |                                 |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    | 148 J                           |                                 |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                 |                                 |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    | 33 J                            |                                 |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                 |                                 |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                 |                                 |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    | 31 J                            |                                 |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                 |                                 |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    | 18 J                            |                                 |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    | 3200                            |                                 |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    | 29 U                            |                                 |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                 |                                 |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    | 1.4 UJ                          |                                 |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    | 2.6 UJ                          |                                 |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                 |                                 |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                 |                                 |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                 |                                 |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                 |                                 |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    | 4.2                             |                                 |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                 |                                 |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                 |                                 |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    | 0.77 UJ                         |                                 |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-09<br>Oct-02<br>0-12" bls | SS-SF/SB-12<br>Oct-02<br>0-12" bls | SS-SF/SB-13<br>Oct-02<br>0-12" bls | SS-SF-14<br>May-04<br>0-12" bls | SS-SF-15<br>May-04<br>0-12" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------|---------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                 |                                 |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                 |                                 |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 4-Chloroaniline                               | 24000                  | 48000                    | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| Acetophenone                                  |                        | 98                       | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| Benzaldehyde                                  | 610000                 |                          | 100 J                              | 410 U                              | 400 U                              | 400 UJ                          | 370 U                           |
| Benzo(a)anthracene                            | 620                    | 620                      | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| Benzo(a)pyrene                                | 62                     | 62                       | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| Benzo(b)fluoranthene                          | 620                    | 620                      | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 41 J                            |
| Benzo(g,h,i)perylene                          |                        |                          | 400 U                              | 410 UJ                             | 400 U                              | 400 U                           | 370 U                           |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| BENZOIC ACID                                  | 100000000              | 48000000                 | 300 NJ                             |                                    |                                    |                                 |                                 |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    | 400 U                              | 410 U                              | 400 U                              | 930 J                           | 430                             |
| Butylbenzylphthalate                          | 1200000                | 2400000                  | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 1800                            |
| Chrysene                                      | 62000                  | 62000                    | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                 |                                 |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                 |                                 |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                 |                                 |
| Fluoranthene                                  | 230000                 | 460000                   | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| HEXADECANOIC ACID                             |                        |                          |                                    | 320 NJ                             | 200 NJ                             |                                 |                                 |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      | 400 U                              | 410 UJ                             | 400 U                              | 400 U                           | 370 U                           |
| MIREX                                         | 270                    |                          | 120 NJ                             |                                    |                                    |                                 |                                 |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                 |                                 |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                 |                                 |
| Phenanthrene                                  |                        |                          | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| Pyrene                                        | 230000                 | 460000                   | 400 U                              | 410 U                              | 400 U                              | 400 U                           | 370 U                           |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    | 920 NJ                             |                                    |                                 |                                 |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                 |                                 |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                 |                                 |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-09<br>Oct-02<br>0-12" bls | SS-SF/SB-12<br>Oct-02<br>0-12" bls | SS-SF/SB-13<br>Oct-02<br>0-12" bls | SS-SF-14<br>May-04<br>0-12" bls | SS-SF-15<br>May-04<br>0-12" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------|---------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 4,4'-DDE                                  | 1700                   | 1700                     | 4 U                                | 4.1 U                              | 4 U                                | 4 U                             | 3.6 U                           |
| 4,4'-DDT                                  | 1700                   | 1700                     | 4 U                                | 4.1 U                              | 4 U                                | 4 U                             | 3.6 U                           |
| alpha-Chlordane                           |                        |                          | 2.1 U                              | 2.1 U                              | 2.1 U                              | 7.9                             | 3.2 N                           |
| Dieldrin                                  | 30                     | 30                       | 4 U                                | 4.1 U                              | 4 U                                | 4 U                             | 3.6 U                           |
| Endosulfan I                              |                        |                          | 2.1 U                              | 2.1 U                              | 2.1 U                              | 2 U                             | 1.9 U                           |
| Endosulfan sulfate                        |                        |                          | 4 U                                | 4.1 U                              | 4 U                                | 4 U                             | 3.6 U                           |
| gamma-Chlordane                           |                        |                          | 2.1 U                              | 2.1 U                              | 2.1 U                              | 7.5 N                           | 3.2                             |
| Heptachlor                                | 110                    | 110                      | 2.1 U                              | 2.1 U                              | 2.1 U                              | 2 U                             | 1.9 U                           |
| Heptachlor epoxide                        | 53                     | 53                       | 2.1 U                              | 2.1 U                              | 2.1 U                              | 2 U                             | 1.9 U                           |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                 |                                 |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     | 10 U                               | 11 U                               | 11 U                               | 11 U                            | 10 U                            |
| 2-Butanone                                | 2200000                | 4400000                  | 10 U                               | 11 U                               | 11 U                               | 11 U                            | 10 U                            |
| Acetone                                   | 1400000                | 2800000                  | 38 U                               | 11 U                               | 22 U                               | 11 U                            | 10 U                            |
| Benzene                                   | 640                    | 640                      | 10 U                               | 11 U                               | 11 U                               | 11 U                            | 10 U                            |
| Methyl Acetate                            | 2200000                |                          | 12                                 | 6 J                                | 4 J                                | 11 U                            | 10 U                            |
| Tetrachloroethene                         | 480                    | 480                      | 10 U                               | 11 U                               | 11 U                               | 11 U                            | 10 U                            |
| Toluene                                   | 520000                 | 132000                   | 10 U                               | 11 U                               | 11 U                               | 11 U                            | 10 U                            |
| Xylenes (total)                           | 27000                  | 54000                    | 10 U                               | 11 U                               | 11 U                               | 11 U                            | 10 U                            |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-16<br>May-04<br>0-12" bls | SS-SF-17<br>May-04<br>0-12" bls | SS-SF-18<br>May-04<br>0-12" bls | SS-SF-19<br>May-04<br>0-12" bls | SS-SF-20<br>May-04<br>0-12" bls |
|------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Aluminum                           | 7600                   |                          | 14000 J                         | 14000 J                         | 17000                           | 15000                           | 15000                           |
| Antimony                           | 3.1                    | 6.2                      | 6 UR                            | 6 UR                            | 6.1 UR                          | 5.9 UR                          | 6.9 UR                          |
| Arsenic                            | 0.39                   | 4.4                      | 1 U                             | 1 U                             | 3.3 J                           | 1.3 J                           | 2.1 J                           |
| Barium                             | 540                    |                          | 180 J                           | 120 J                           | 33 J                            | 66 J                            | 31 J                            |
| Beryllium                          | 15                     | 30                       | 0.41 J                          | 1.2                             | 0.43 J                          | 0.47 J                          | 0.32 J                          |
| Cadmium                            | 3.7                    | 7.4                      | 0.97                            | 0.48 J                          | 0.55                            | 0.67                            | 0.56 UJ                         |
| Calcium                            |                        |                          | 2800                            | 1100                            | 390 J                           | 1500                            | 1600                            |
| Chromium                           | 30                     | 30                       | 16 J                            | 24 J                            | 15 J                            | 17 J                            | 11 J                            |
| Cobalt                             | 900                    |                          | 2.4 UJ                          | 9.1                             | 3.3 J                           | 3 J                             | 1.5 J                           |
| Copper                             | 310                    | 620                      | 77                              | 11                              | 9.2                             | 9.6                             | 5.9                             |
| Iron                               | 2300                   |                          | 14000 J                         | 20000 J                         | 18000 J                         | 19000 J                         | 16000 J                         |
| Lead                               | 400                    | 400                      | 34 J                            | 12 J                            | 13                              | 19                              | 15                              |
| Magnesium                          |                        |                          | 1200                            | 1900                            | 460 J                           | 1500 J                          | 710 J                           |
| Manganese                          | 180                    | 360                      | 110 J                           | 560 J                           | 200 J                           | 160 J                           | 110 J                           |
| Mercury                            | 0.61                   | 4.6                      | 0.33                            | 0.04 UJ                         | 0.04 UJ                         | 0.03 UJ                         | 0.03 UJ                         |
| Nickel                             | 160                    | 320                      | 10 J                            | 7.7 J                           | 3.1 UJ                          | 5.2 J                           | 2.3 UJ                          |
| Potassium                          |                        |                          | 750                             | 1100                            | 660 J                           | 1300 J                          | 570 J                           |
| Selenium                           | 39                     | 78                       | 3.5 U                           | 1.1 UJ                          | 3.6 UJ                          | 3.4 UJ                          | 4 UJ                            |
| Silver                             | 39                     | 78                       | 0.65 UJ                         | 1 U                             | 1 U                             | 0.12 UJ                         | 1.1 U                           |
| Sodium                             |                        |                          | 100 J                           | 44 UJ                           | 14 J                            | 24 J                            | 16 J                            |
| Thallium                           | 0.52                   | 1.04                     | 2.5 U                           | 2.5 U                           | 2.5 UR                          | 2.5 UR                          | 2.9 UR                          |
| Vanadium                           | 7.8                    | 15.6                     | 30 J                            | 41 J                            | 40                              | 43                              | 40                              |
| Zinc                               | 2300                   | 4600                     | 260 J                           | 32 J                            | 17 J                            | 38 J                            | 31 J                            |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-16<br>May-04<br>0-12" bls | SS-SF-17<br>May-04<br>0-12" bls | SS-SF-18<br>May-04<br>0-12" bls | SS-SF-19<br>May-04<br>0-12" bls | SS-SF-20<br>May-04<br>0-12" bls |
|------------------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                 |                                 |                                 | 26                              |                                 |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                 |                                 |                                 | 120                             |                                 |
| 1,2,3,4,7,8-HEPTACHLORODIBENZOFURAN                  |                        |                          |                                 |                                 |                                 | 2.2 UR                          |                                 |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 |                                 | 0.62 U                          |                                 |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 |                                 | 1.2 U                           |                                 |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 |                                 | 1.8 U                           |                                 |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 |                                 | 3.7 U                           |                                 |
| 1,2,3,7,8-HEXACHLORODIBENZO-P-DIOXIN                 |                        |                          |                                 |                                 |                                 | 4.3 U                           |                                 |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                 |                                 |                                 | 0.4 U                           |                                 |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                 |                                 |                                 | 0.89 U                          |                                 |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 |                                 | 0.74 U                          |                                 |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                 |                                 |                                 | 0.42 U                          |                                 |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                 |                                 |                                 | 0.41 U                          |                                 |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                 |                                 |                                 | 0.29 U                          |                                 |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                 |                                 |                                 | 220 J                           |                                 |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 |                                 | 47 J                            |                                 |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                 |                                 |                                 | 7.9 J                           |                                 |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                 |                                 |                                 |                                 |                                 |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                 |                                 |                                 | 4 J                             |                                 |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                 |                                 |                                 | 4200                            |                                 |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                 |                                 |                                 | 46                              |                                 |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                 |                                 |                                 | 1.4 UJ                          |                                 |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 |                                 | 0.64 UJ                         |                                 |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                 |                                 |                                 | 5.7                             |                                 |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 |                                 | 0.6 UJ                          |                                 |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-16<br>May-04<br>0-12" bls | SS-SF-17<br>May-04<br>0-12" bls | SS-SF-18<br>May-04<br>0-12" bls | SS-SF-19<br>May-04<br>0-12" bls | SS-SF-20<br>May-04<br>0-12" bls |
|-----------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                 |                                 |                                 |                                 |                                 |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| GAMMA-SITOSTEROL                              |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 17-OCTADECENAL                                |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 2-HEPTACOSANONE                               |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 2-PENTACOSANONE                               |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 4-Chloroaniline                               | 24000                  | 48000                    | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Acetophenone                                  |                        | 98                       | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Benzaldehyde                                  | 610000                 |                          | 58 J                            | 400 UJ                          | 370 UJ                          | 380 UJ                          | 410 UJ                          |
| Benzo(a)anthracene                            | 620                    | 620                      | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Benzo(a)pyrene                                | 62                     | 62                       | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Benzo(b)fluoranthene                          | 620                    | 620                      | 64 J                            | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Benzo(g,h,i)perylene                          |                        |                          | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     | 44 J                            | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                 |                                 |                                 |                                 |                                 |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    | 1300 J                          | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Butylbenzylphthalate                          | 1200000                | 2400000                  | 960 J                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Chrysene                                      | 62000                  | 62000                    | 50 J                            | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                 |                                 |                                 |                                 |                                 |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| EICOSANOL (2 isomers)                         |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Fluoranthene                                  | 230000                 | 460000                   | 50 J                            | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| HEXADECANOIC ACID                             |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| MIREX                                         | 270                    |                          |                                 |                                 |                                 |                                 |                                 |
| OCTADECANOIC ACID                             |                        |                          |                                 |                                 |                                 |                                 |                                 |
| OCTADECENAL                                   |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Phenanthrene                                  |                        |                          | 420 U                           | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| Pyrene                                        | 230000                 | 460000                   | 51 J                            | 400 U                           | 370 U                           | 380 U                           | 410 U                           |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TETRADECANAL                                  |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TETRADECANOIC ACID                            |                        |                          |                                 |                                 |                                 |                                 |                                 |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-16<br>May-04<br>0-12" bls | SS-SF-17<br>May-04<br>0-12" bls | SS-SF-18<br>May-04<br>0-12" bls | SS-SF-19<br>May-04<br>0-12" bls | SS-SF-20<br>May-04<br>0-12" bls |
|-------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 4,4'-DDE                                  | 1700                   | 1700                     | 4.2 U                           | 4 U                             | 3.7 U                           | 3.8 U                           | 4 U                             |
| 4,4'-DDT                                  | 1700                   | 1700                     | 4.2 U                           | 4 U                             | 3.7 U                           | 3.8 U                           | 4.2                             |
| alpha-Chlordane                           |                        |                          | 7.4                             | 2.1 U                           | 1.9 U                           | 2 U                             | 2.1 U                           |
| Dieldrin                                  | 30                     | 30                       | 4.3 U                           | 4 U                             | 3.7 U                           | 3.8 U                           | 4 U                             |
| Endosulfan I                              |                        |                          | 2.1 U                           | 2.1 U                           | 1.9 U                           | 2 U                             | 2.1 U                           |
| Endosulfan sulfate                        |                        |                          | 4.2 U                           | 4 U                             | 3.7 U                           | 3.8 U                           | 4 U                             |
| gamma-Chlordane                           |                        |                          | 9.8                             | 2.1 U                           | 1.9 U                           | 2 U                             | 2.1 U                           |
| Heptachlor                                | 110                    | 110                      | 2.1 U                           | 2.1 U                           | 1.9 U                           | 2 U                             | 2.1 U                           |
| Heptachlor epoxide                        | 53                     | 53                       | 2.1 U                           | 2.1 U                           | 1.9 U                           | 2 U                             | 2.1 U                           |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| 2-Butanone                                | 2200000                | 4400000                  | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| Acetone                                   | 1400000                | 2800000                  | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| Benzene                                   | 640                    | 640                      | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| Methyl Acetate                            | 2200000                |                          | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| Tetrachloroethene                         | 480                    | 480                      | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| Toluene                                   | 520000                 | 132000                   | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |
| Xylenes (total)                           | 27000                  | 54000                    | 12 U                            | 11 U                            | 10 U                            | 10 U                            | 11 U                            |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-21<br>May-04<br>0-12" bls | SS-SF-22<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-24<br>May-04<br>0-12" bls |
|------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Aluminum                           | 7600                   |                          | 15000                           | 18000 J                         | 22000                           | 20000                           | 6300                            |
| Antimony                           | 3.1                    | 6.2                      | 6.5 UR                          | 5.4 UR                          | 1.4 J                           | 1.3 J                           | 6.5 UR                          |
| Arsenic                            | 0.39                   | 4.4                      | 3.8 J                           | 0.9 U                           | 1.1 UR                          | 1.1 UR                          | 1.4 J                           |
| Barium                             | 540                    |                          | 38 J                            | 59 J                            | 500 J                           | 420 J                           | 39 J                            |
| Beryllium                          | 15                     | 30                       | 0.54 J                          | 0.45 J                          | 0.73                            | 0.64                            | 0.24 J                          |
| Cadmium                            | 3.7                    | 7.4                      | 0.95                            | 0.55                            | 0.51 UJ                         | 0.47 UJ                         | 0.22 UJ                         |
| Calcium                            |                        |                          | 1400                            | 1100                            | 1100                            | 990                             | 850                             |
| Chromium                           | 30                     | 30                       | 14 J                            | 18 J                            | 25 J                            | 20 J                            | 4.1 J                           |
| Cobalt                             | 900                    |                          | 1.2 J                           | 3.1 UJ                          | 4.2 J                           | 3.9 J                           | 1.3 J                           |
| Copper                             | 310                    | 620                      | 22                              | 14                              | 21                              | 19                              | 4.1                             |
| Iron                               | 2300                   |                          | 25000 J                         | 11000 J                         | 15000 J                         | 13000 J                         | 5500 J                          |
| Lead                               | 400                    | 400                      | 27                              | 14 J                            | 19                              | 14                              | 15                              |
| Magnesium                          |                        |                          | 520 J                           | 1000                            | 2200 J                          | 1900 J                          | 340 J                           |
| Manganese                          | 180                    | 360                      | 68 J                            | 150 J                           | 220 J                           | 190 J                           | 260 J                           |
| Mercury                            | 0.61                   | 4.6                      | 0.11 UJ                         | 0.06 UJ                         | 0.08 UJ                         | 0.07 UJ                         | 0.05 UJ                         |
| Nickel                             | 160                    | 320                      | 5.4 J                           | 6.4 J                           | 5.2 J                           | 4.8 J                           | 1.9 UJ                          |
| Potassium                          |                        |                          | 430 J                           | 680                             | 1800 J                          | 1600 J                          | 230 J                           |
| Selenium                           | 39                     | 78                       | 3.8 UJ                          | 3.2 U                           | 2 UJ                            | 1.1 UJ                          | 3.8 UJ                          |
| Silver                             | 39                     | 78                       | 1.1 U                           | 0.9 U                           | 1.1 U                           | 0.12 UJ                         | 1.1 U                           |
| Sodium                             |                        |                          | 26 J                            | 21 UJ                           | 22 J                            | 20 UJ                           | 27 J                            |
| Thallium                           | 0.52                   | 1.04                     | 2.7 UR                          | 2.3 U                           | 2.8 UR                          | 2.7 UR                          | 2.7 UR                          |
| Vanadium                           | 7.8                    | 15.6                     | 58                              | 25 J                            | 35                              | 30                              | 11                              |
| Zinc                               | 2300                   | 4600                     | 88 J                            | 48 J                            | 50 J                            | 45 J                            | 120 J                           |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-21<br>May-04<br>0-12" bls | SS-SF-22<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-24<br>May-04<br>0-12" bls |
|------------------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                 |                                 | 97 U                            | 90 U                            | 7.2 U                           |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                 |                                 | 280                             | 280                             | 65                              |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                 |                                 | 5.8 UR                          | 5.3 UR                          | 2.3 UR                          |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 | 2.2 J                           | 1.7 U                           | 1.3 U                           |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 | 2.8 U                           | 2.2 U                           | 1.9 U                           |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 | 3.7 U                           | 3.1 U                           | 1.6 U                           |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 | 14 U                            | 13 U                            | 2.4 U                           |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 | 15 U                            | 7.8 U                           | 2.1 U                           |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                 |                                 | 0.64 U                          | 0.5 U                           | 0.73 U                          |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                 |                                 | 1.3 U                           | 1.3 U                           | 0.89 U                          |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 | 2.6 J                           | 2 U                             | 0.53 U                          |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                 |                                 | 1 U                             | 0.75 U                          | 0.72 U                          |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                 |                                 | 0.39 U                          | 0.43 U                          | 0.54 U                          |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                 |                                 | 0.53 U                          | 0.39 U                          | 0.63 U                          |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                 |                                 | 480 J                           | 540 J                           | 310 J                           |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 | 167 J                           | 220 J                           | 12 J                            |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                 |                                 | 49 J                            | 68 J                            | 8.5 UJ                          |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                 |                                 |                                 |                                 |                                 |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                 |                                 | 22 J                            | 40 J                            | 1.3 J                           |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                 |                                 | 3400                            | 3100                            | 860                             |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                 |                                 | 230                             | 270                             | 20 U                            |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                 |                                 | 1.3 UJ                          | 1.3 UJ                          | 7.4 UJ                          |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 | 4.9 J                           | 9.6 J                           | 1.1 UJ                          |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                 |                                 | 7.9                             | 6.2                             | 1.5                             |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 | 0.57 UJ                         | 0.52 J                          | 0.63 UJ                         |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-21<br>May-04<br>0-12" bls | SS-SF-22<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-24<br>May-04<br>0-12" bls |
|-----------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                 |                                 |                                 |                                 |                                 |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| GAMMA-SITOSTEROL                              |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 17-OCTADECENAL                                |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 2-HEPTACOSANONE                               |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 2-PENTACOSANONE                               |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 4-Chloroaniline                               | 24000                  | 48000                    | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Acetophenone                                  |                        | 98                       | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Benzaldehyde                                  | 610000                 |                          | 390 UJ                          | 360 U                           | 400 UJ                          | 380 U                           | 400 U                           |
| Benzo(a)anthracene                            | 620                    | 620                      | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Benzo(a)pyrene                                | 62                     | 62                       | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Benzo(b)fluoranthene                          | 620                    | 620                      | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Benzo(g,h,i)perylene                          |                        |                          | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                 |                                 |                                 |                                 |                                 |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    | 700                             | 360 U                           | 2800                            | 9300                            | 400 U                           |
| Butylbenzylphthalate                          | 1200000                | 2400000                  | 1000                            | 360 U                           | 720                             | 1200                            | 400 U                           |
| Chrysene                                      | 62000                  | 62000                    | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                 |                                 |                                 |                                 |                                 |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                 |                                 |                                 |                                 |                                 |
| EICOSANOL (2 isomers)                         |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Fluoranthene                                  | 230000                 | 460000                   | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| HEXADECANOIC ACID                             |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| MIREX                                         | 270                    |                          |                                 |                                 |                                 |                                 |                                 |
| OCTADECANOIC ACID                             |                        |                          |                                 |                                 |                                 |                                 |                                 |
| OCTADECENAL                                   |                        |                          |                                 |                                 |                                 |                                 |                                 |
| Phenanthrene                                  |                        |                          | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| Pyrene                                        | 230000                 | 460000                   | 390 U                           | 360 U                           | 400 U                           | 380 U                           | 400 U                           |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TETRADECANAL                                  |                        |                          |                                 |                                 |                                 |                                 |                                 |
| TETRADECANOIC ACID                            |                        |                          |                                 |                                 |                                 |                                 |                                 |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-21<br>May-04<br>0-12" bls | SS-SF-22<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-23<br>May-04<br>0-12" bls | SS-SF-24<br>May-04<br>0-12" bls |
|-------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 4,4'-DDE                                  | 1700                   | 1700                     | 3.9 U                           | 3.6 U                           | 4 U                             | 3.9 U                           | 4 U                             |
| 4,4'-DDT                                  | 1700                   | 1700                     | 3.9 U                           | 3.6 U                           | 4 U                             | 3.9 U                           | 4 U                             |
| alpha-Chlordane                           |                        |                          | 2.2                             | 1.8 U                           | 2.1 U                           | 2 U                             | 2.1 U                           |
| Dieldrin                                  | 30                     | 30                       | 3.9 U                           | 3.6 U                           | 4 U                             | 3.9 U                           | 4 U                             |
| Endosulfan I                              |                        |                          | 2 U                             | 1.8 U                           | 2.1 U                           | 2 U                             | 2.1 U                           |
| Endosulfan sulfate                        |                        |                          | 3.9 U                           | 3.6 U                           | 4 U                             | 3.9 U                           | 4 U                             |
| gamma-Chlordane                           |                        |                          | 2.4 N                           | 1.8 U                           | 2.1 U                           | 2 U                             | 2.1 U                           |
| Heptachlor                                | 110                    | 110                      | 2 U                             | 1.8 U                           | 2.1 U                           | 2 U                             | 2.1 U                           |
| Heptachlor epoxide                        | 53                     | 53                       | 2 U                             | 1.8 U                           | 2.1 U                           | 2 U                             | 2.1 U                           |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                 |                                 |                                 |                                 |                                 |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |
| 2-Butanone                                | 2200000                | 4400000                  | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |
| Acetone                                   | 1400000                | 2800000                  | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 15                              |
| Benzene                                   | 640                    | 640                      | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |
| Methyl Acetate                            | 2200000                |                          | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |
| Tetrachloroethene                         | 480                    | 480                      | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |
| Toluene                                   | 520000                 | 132000                   | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |
| Xylenes (total)                           | 27000                  | 54000                    | 11 U                            | 11 U                            | 12 U                            | 14 U                            | 12 U                            |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-25<br>May-04<br>0-12" bls | SS-SF-26<br>May-04<br>0-12" bls | SS-SF-27<br>May-04<br>0-12" bls | SS-SF/SB-B25<br>Feb-05<br>0-6" bls | SS-SF/SB-C04<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Aluminum                           | 7600                   |                          | 9400                            | 12000                           | 8200                            | 29000                              | 13000                              |
| Antimony                           | 3.1                    | 6.2                      | 6.1 UR                          | 6.6 UR                          | 6.4 UR                          | 7.8 UR                             | 7.2 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 0.27 UJ                         | 2.3                             | 1.6 J                           | 3.1                                | 0.96 R                             |
| Barium                             | 540                    |                          | 27 J                            | 44                              | 30 J                            | 19 J                               | 24 J                               |
| Beryllium                          | 15                     | 30                       | 0.37 J                          | 0.34 J                          | 0.28 J                          | 0.69                               | 0.19 UJ                            |
| Cadmium                            | 3.7                    | 7.4                      | 0.23 UJ                         | 0.53 UJ                         | 0.29 UJ                         | 0.65 U                             | 0.6 U                              |
| Calcium                            |                        |                          | 350 J                           | 630                             | 320 J                           | 490 J                              | 180 J                              |
| Chromium                           | 30                     | 30                       | 6.2 J                           | 9.4 J                           | 7.2 J                           | 56 J                               | 9.4 J                              |
| Cobalt                             | 900                    |                          | 2.3 J                           | 1.8 J                           | 2.1 J                           | 0.72 J                             | 1.4 J                              |
| Copper                             | 310                    | 620                      | 3.8                             | 42                              | 4.2                             | 28 J                               | 3.9 J                              |
| Iron                               | 2300                   |                          | 6200 J                          | 11000 J                         | 7700 J                          | 57000                              | 9700                               |
| Lead                               | 400                    | 400                      | 9.9                             | 28                              | 9.2                             | 16 J                               | 12                                 |
| Magnesium                          |                        |                          | 840 J                           | 400 J                           | 250 J                           | 510 J                              | 320 J                              |
| Manganese                          | 180                    | 360                      | 110 J                           | 63 J                            | 160 J                           | 130                                | 74                                 |
| Mercury                            | 0.61                   | 4.6                      | 0.02 UJ                         | 0.14                            | 0.04 UJ                         | 0.08 UJ                            | 0.12 U                             |
| Nickel                             | 160                    | 320                      | 1.9 UJ                          | 3.3 UJ                          | 1.9 UJ                          | 11                                 | 3.4 UJ                             |
| Potassium                          |                        |                          | 630 J                           | 460 J                           | 370 J                           | 780                                | 380 J                              |
| Selenium                           | 39                     | 78                       | 0.76 UJ                         | 3.9 UJ                          | 3.7 UJ                          | 3.9 J                              | 4.2 U                              |
| Silver                             | 39                     | 78                       | 0.17 UJ                         | 0.16 UJ                         | 1.1 U                           | 1.3 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 11 J                            | 19 J                            | 16 J                            | 650 U                              | 54 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 2.6 UR                          | 2.8 UR                          | 2.7 UR                          | 3.2 U                              | 3 U                                |
| Vanadium                           | 7.8                    | 15.6                     | 15                              | 127                             | 120                             | 120                                | 25                                 |
| Zinc                               | 2300                   | 4600                     | 24 J                            | 52 J                            | 13 J                            | 26 J                               | 13 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-25<br>May-04<br>0-12" bls | SS-SF-26<br>May-04<br>0-12" bls | SS-SF-27<br>May-04<br>0-12" bls | SS-SF/SB-B25<br>Feb-05<br>0-6" bls | SS-SF/SB-C04<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                 |                                 |                                 |                                    | 2.3 J                              |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                 |                                 |                                 |                                    | 32                                 |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                 |                                 |                                 |                                    | 0.49 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 |                                 |                                    | 0.23 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 |                                 |                                    | 0.65 J                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 |                                 |                                    | 0.23 U                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 |                                 |                                    | 1.1 J                              |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                 |                                 |                                 |                                    | 2 J                                |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                 |                                 |                                 |                                    | 0.14 U                             |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                 |                                 |                                 |                                    | 0.41 U                             |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                 |                                 |                                 |                                    | 0.21 U                             |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                 |                                 |                                 |                                    | 0.13 U                             |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                 |                                 |                                 |                                    | 0.13 U                             |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                 |                                 |                                 |                                    | 0.21 J                             |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                    | 78 J                               |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                    | 4.6 J                              |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                 |                                 |                                 |                                    | 13 J                               |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                 |                                 |                                 |                                    | 1.4 J                              |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                 |                                 |                                 |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                 |                                 |                                 |                                    | 1000                               |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                 |                                 |                                 |                                    | 3.3 J                              |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                    | 0.32 J                             |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                 |                                 |                                 |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                    | 0.6 J                              |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                 |                                 |                                 |                                    | 1.4 J                              |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                 |                                 |                                 |                                    | 1.2 J                              |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                 |                                 |                                 |                                    | 1.5 J                              |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                 |                                 |                                 |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                 |                                 |                                 |                                    | 0.13 UJ                            |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                 |                                 |                                 |                                    | 0.21 J                             |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                 |                                 |                                 |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-25<br>May-04<br>0-12" bls | SS-SF-26<br>May-04<br>0-12" bls | SS-SF-27<br>May-04<br>0-12" bls | SS-SF/SB-B25<br>Feb-05<br>0-6" bls | SS-SF/SB-C04<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                 |                                 |                                 |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                 |                                 |                                 |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Acetophenone                                  |                        | 98                       | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          | 390 UJ                          | 410 U                           | 430 U                           |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                 |                                 |                                 |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  | 390 U                           | 110 J                           | 430 U                           |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                 |                                 |                                 |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                 |                                 |                                 |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| MIREX                                         | 270                    |                          |                                 |                                 |                                 |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                 |                                 |                                 |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                 |                                 |                                 |                                    |                                    |
| Phenanthrene                                  |                        |                          | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   | 390 U                           | 410 U                           | 430 U                           |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                 |                                 |                                 |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                 |                                 |                                 |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                 |                                 |                                 |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF-25<br>May-04<br>0-12" bls | SS-SF-26<br>May-04<br>0-12" bls | SS-SF-27<br>May-04<br>0-12" bls | SS-SF/SB-B25<br>Feb-05<br>0-6" bls | SS-SF/SB-C04<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     | 3.9 U                           | 4.1 U                           | 4.3 U                           |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     | 3.9 U                           | 4.1 U                           | 4.3 U                           |                                    |                                    |
| alpha-Chlordane                           |                        |                          | 2 U                             | 2.1 U                           | 2.2 U                           |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       | 3.9 U                           | 4.1 U                           | 4.3 U                           |                                    |                                    |
| Endosulfan I                              |                        |                          | 2 U                             | 2.1 U                           | 2.2 U                           |                                    |                                    |
| Endosulfan sulfate                        |                        |                          | 3.9 U                           | 4.1 U                           | 4.3 U                           |                                    |                                    |
| gamma-Chlordane                           |                        |                          | 2 U                             | 2.1 U                           | 2.2 U                           |                                    |                                    |
| Heptachlor                                | 110                    | 110                      | 2 U                             | 2.1 U                           | 2.2 U                           |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       | 2 U                             | 2.1 U                           | 2.2 U                           |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                 |                                 |                                 |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     | 11 U                            | 11 U                            | 11 U                            |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  | 11 U                            | 11 U                            | 11                              |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  | 11 U                            | 11 U                            | 40                              |                                    |                                    |
| Benzene                                   | 640                    | 640                      | 11 U                            | 11 U                            | 11 U                            |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          | 11 U                            | 11 U                            | 11 U                            |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      | 11 U                            | 11 U                            | 11 U                            |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   | 11 U                            | 11 U                            | 2 J                             |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    | 11 U                            | 11 U                            | 11 U                            |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C04<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C12<br>Feb-05<br>0-6" bls | SS-SF/SB-C14<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          |                                    | 18000                              | 17000                              | 32000                              | 22000                              |
| Antimony                           | 3.1                    | 6.2                      |                                    | 7.4 UR                             | 7.4 UR                             | 7.3 UR                             | 9.3 UR                             |
| Arsenic                            | 0.39                   | 4.4                      |                                    | 0.97 R                             | 1.2 R                              | 1.9 J                              | 2.1 J                              |
| Barium                             | 540                    |                          |                                    | 95                                 | 110                                | 75                                 | 53                                 |
| Beryllium                          | 15                     | 30                       |                                    | 0.33 UJ                            | 0.32 UJ                            | 0.56 UJ                            | 0.39 UJ                            |
| Cadmium                            | 3.7                    | 7.4                      |                                    | 0.26 J                             | 0.26 J                             | 0.29 J                             | 0.11 J                             |
| Calcium                            |                        |                          |                                    | 3000                               | 1600                               | 820                                | 1100                               |
| Chromium                           | 30                     | 30                       |                                    | 14 J                               | 14 J                               | 13 J                               | 16 J                               |
| Cobalt                             | 900                    |                          |                                    | 1.1 J                              | 1.4 J                              | 2.9 J                              | 2.9 J                              |
| Copper                             | 310                    | 620                      |                                    | 19 J                               | 21 J                               | 7.6 J                              | 22 J                               |
| Iron                               | 2300                   |                          |                                    | 17000                              | 17000                              | 16000                              | 17000                              |
| Lead                               | 400                    | 400                      |                                    | 22                                 | 23                                 | 20                                 | 32                                 |
| Magnesium                          |                        |                          |                                    | 720                                | 680                                | 1200                               | 780                                |
| Manganese                          | 180                    | 360                      |                                    | 120                                | 130                                | 210                                | 210                                |
| Mercury                            | 0.61                   | 4.6                      |                                    | 0.12 UJ                            | 0.07 UJ                            | 0.1 UJ                             | 0.1 UJ                             |
| Nickel                             | 160                    | 320                      |                                    | 4.4 UJ                             | 4.4 UJ                             | 6.8                                | 6.9                                |
| Potassium                          |                        |                          |                                    | 460 J                              | 490 J                              | 930                                | 690 J                              |
| Selenium                           | 39                     | 78                       |                                    | 4.3 U                              | 4.3 U                              | 4.3 U                              | 5.4 U                              |
| Silver                             | 39                     | 78                       |                                    | 1.2 U                              | 1.2 U                              | 1.2 U                              | 1.6 U                              |
| Sodium                             |                        |                          |                                    | 52 UJ                              | 50 UJ                              | 74 UJ                              | 87 UJ                              |
| Thallium                           | 0.52                   | 1.04                     |                                    | 3.1 U                              | 3.1 U                              | 3 U                                | 3.9 U                              |
| Vanadium                           | 7.8                    | 15.6                     |                                    | 4.7                                | 4.6                                | 40                                 | 43                                 |
| Zinc                               | 2300                   | 4600                     |                                    | 100 J                              | 110 J                              | 46 J                               | 85 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C04<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C12<br>Feb-05<br>0-6" bls | SS-SF/SB-C14<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          | 2.1 J                              |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          | 15                                 |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          | 0.57 U                             |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.2 U                              |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.25 U                             |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.16 U                             |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.48 J                             |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.41 J                             |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.18 U                             |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          | 0.22 U                             |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.18 U                             |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.19 U                             |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        | 0.21 U                             |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          | 0.27 U                             |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          | 31 J                               |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          | 4.3 J                              |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          | 2.6 J                              |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          | 0.35 J                             |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          | 570                                |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          | 2.9 J                              |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          | 0.22 UJ                            |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          | 0.19 UJ                            |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          | 1.2 J                              |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          | 0.87 J                             |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          | 1 J                                |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          | 0.21 UJ                            |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          | 0.27 UJ                            |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C04<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C12<br>Feb-05<br>0-6" bls | SS-SF/SB-C14<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C04<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C08<br>Feb-05<br>0-6" bls | SS-SF/SB-C12<br>Feb-05<br>0-6" bls | SS-SF/SB-C14<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-D05<br>Feb-05<br>0-6" bls | SS-SF/SB-D07<br>Feb-05<br>0-6" bls | SS-SF/SB-D09<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 22000                              | 28000                              | 15000                              | 15000                              | 10000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.5 UR                             | 7.4 UR                             | 7.7 UR                             | 7.2 UR                             | 0.66 UJ                            |
| Arsenic                            | 0.39                   | 4.4                      | 1.3 U                              | 1.5 U                              | 1 R                                | 1.4 U                              | 1.2 U                              |
| Barium                             | 540                    |                          | 33                                 | 38                                 | 32                                 | 30                                 | 94                                 |
| Beryllium                          | 15                     | 30                       | 0.43 UJ                            | 0.53 UJ                            | 0.25 UJ                            | 0.23 UJ                            | 0.2 J                              |
| Cadmium                            | 3.7                    | 7.4                      | 0.08 J                             | 0.09 J                             | 0.64 U                             | 0.6 U                              | 0.61 U                             |
| Calcium                            |                        |                          | 600 J                              | 630                                | 310 J                              | 860                                | 1000                               |
| Chromium                           | 30                     | 30                       | 21 J                               | 25 J                               | 12 J                               | 9.2 J                              | 7.9 J                              |
| Cobalt                             | 900                    |                          | 2.9 J                              | 3.8 J                              | 0.96 J                             | 1.3 J                              | 1.4 J                              |
| Copper                             | 310                    | 620                      | 15 J                               | 19 J                               | 5.5 J                              | 6.3 J                              | 10 J                               |
| Iron                               | 2300                   |                          | 26000                              | 32000                              | 11000                              | 11000                              | 7700                               |
| Lead                               | 400                    | 400                      | 15                                 | 18                                 | 18                                 | 9.2 J                              | 11 J                               |
| Magnesium                          |                        |                          | 630                                | 760                                | 380 J                              | 410 J                              | 600 J                              |
| Manganese                          | 180                    | 360                      | 300                                | 330                                | 130                                | 88                                 | 140                                |
| Mercury                            | 0.61                   | 4.6                      | 0.13 U                             | 0.1 UJ                             | 0.13 U                             | 0.06 UJ                            | 0.12 U                             |
| Nickel                             | 160                    | 320                      | 7.6                                | 9.4                                | 4.1 UJ                             | 5.6                                | 3.5 UJ                             |
| Potassium                          |                        |                          | 590 J                              | 720                                | 400 J                              | 380 J                              | 480 J                              |
| Selenium                           | 39                     | 78                       | 4.4 U                              | 4.3 U                              | 4.5 U                              | 4.2 U                              | 4.2 U                              |
| Silver                             | 39                     | 78                       | 1.3 U                              | 1.2 U                              | 1.3 U                              | 1.2 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 42 UJ                              | 36 UJ                              | 45 UJ                              | 61 UJ                              | 94 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.1 U                              | 3.1 U                              | 3.2 U                              | 3 U                                | 3 U                                |
| Vanadium                           | 7.8                    | 15.6                     | 367                                | 84                                 | 25                                 | 27                                 | 18                                 |
| Zinc                               | 2300                   | 4600                     | 36 J                               | 41 J                               | 14 J                               | 21 J                               | 45 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-D05<br>Feb-05<br>0-6" bls | SS-SF/SB-D07<br>Feb-05<br>0-6" bls | SS-SF/SB-D09<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    | 7.7                                |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    |                                    | 63                                 |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    | 0.65 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    | 0.27 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    | 0.51 U                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    | 0.32 U                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    | 2.4 J                              |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    | 1 J                                |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    | 0.25 U                             |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    |                                    | 0.29 U                             |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    | 0.48 J                             |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    | 0.26 U                             |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    |                                    | 0.22 U                             |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    |                                    | 0.28 U                             |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    | 120 J                              |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    | 19 J                               |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    | 16 J                               |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    | 7.2 J                              |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    |                                    | 950                                |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    |                                    | 13                                 |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    | 0.75 J                             |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    | 2.9 J                              |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    | 1.6 J                              |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    | 1.3 J                              |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    | 2 J                                |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    | 0.22 UJ                            |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    | 0.28 UJ                            |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-D05<br>Feb-05<br>0-6" bls | SS-SF/SB-D07<br>Feb-05<br>0-6" bls | SS-SF/SB-D09<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-C22<br>Feb-05<br>0-6" bls | SS-SF/SB-D05<br>Feb-05<br>0-6" bls | SS-SF/SB-D07<br>Feb-05<br>0-6" bls | SS-SF/SB-D09<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D11<br>Feb-05<br>0-6" bls | SS-SF/SB-D13<br>Feb-05<br>0-6" bls | SS-SF/SB-D15<br>Feb-05<br>0-6" bls | SS-SF/SB-D17<br>Feb-05<br>0-6" bls | SS-SF/SB-D21<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 41000                              | 14000                              | 21000                              | 29000                              | 36000                              |
| Antimony                           | 3.1                    | 6.2                      | 1.6 UJ                             | 7.4 UR                             | 8.1 UR                             | 6.8 UR                             | 1.4 UJ                             |
| Arsenic                            | 0.39                   | 4.4                      | 2.6 J                              | 1.6                                | 2.1 J                              | 1.1 UR                             | 1.3 R                              |
| Barium                             | 540                    |                          | 240                                | 32                                 | 55                                 | 320                                | 360                                |
| Beryllium                          | 15                     | 30                       | 0.73 UJ                            | 0.23 J                             | 0.29 UJ                            | 0.72 J                             | 1.6                                |
| Cadmium                            | 3.7                    | 7.4                      | 0.09 J                             | 0.62 U                             | 0.13 J                             | 0.06 J                             | 0.67 U                             |
| Calcium                            |                        |                          | 3000                               | 2300                               | 4400                               | 3600                               | 1000                               |
| Chromium                           | 30                     | 30                       | 26 J                               | 10 J                               | 15 J                               | 169 J                              | 80 J                               |
| Cobalt                             | 900                    |                          | 5 J                                | 1.2 J                              | 1.2 J                              | 16 J                               | 16 J                               |
| Copper                             | 310                    | 620                      | 58 J                               | 5.4 J                              | 12 J                               | 59 J                               | 20 J                               |
| Iron                               | 2300                   |                          | 26000                              | 13000                              | 21000                              | 40000                              | 50000                              |
| Lead                               | 400                    | 400                      | 43 J                               | 38                                 | 28                                 | 12                                 | 15 J                               |
| Magnesium                          |                        |                          | 2900                               | 680                                | 890                                | 7600                               | 7600                               |
| Manganese                          | 180                    | 360                      | 280                                | 99                                 | 260                                | 390                                | 770                                |
| Mercury                            | 0.61                   | 4.6                      | 0.16                               | 0.12 U                             | 0.13 UJ                            | 0.11 U                             | 0.04 UJ                            |
| Nickel                             | 160                    | 320                      | 12                                 | 3.1 UJ                             | 4.7 UJ                             | 43                                 | 23                                 |
| Potassium                          |                        |                          | 2800                               | 370 J                              | 730                                | 8600                               | 9600                               |
| Selenium                           | 39                     | 78                       | 5.2 U                              | 1.4 J                              | 4.7 U                              | 4 U                                | 1.6 R                              |
| Silver                             | 39                     | 78                       | 1.5 U                              | 1.2 U                              | 1.4 U                              | 1.1 U                              | 1.3 U                              |
| Sodium                             |                        |                          | 140 UJ                             | 83 UJ                              | 46 UJ                              | 190 UJ                             | 160 UJ                             |
| Thallium                           | 0.52                   | 1.04                     | 3.7 U                              | 3.1 U                              | 3.4 U                              | 2.8 U                              | 3.3 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 168                                | 30                                 | 51                                 | 110                                | 98                                 |
| Zinc                               | 2300                   | 4600                     | 190 J                              | 62 J                               | 65 J                               | 75 J                               | 110 J                              |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D11<br>Feb-05<br>0-6" bls | SS-SF/SB-D13<br>Feb-05<br>0-6" bls | SS-SF/SB-D15<br>Feb-05<br>0-6" bls | SS-SF/SB-D17<br>Feb-05<br>0-6" bls | SS-SF/SB-D21<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    | 1.3 J                              |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    | 41                                 |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    | 0.6 U                              |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    | 0.4 U                              |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    | 0.52 J                             |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    | 0.4 U                              |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    | 0.92 J                             |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    | 0.77 J                             |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    | 0.2 U                              |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    | 0.33 J                             |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    | 0.39 U                             |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    | 0.25 J                             |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    | 0.16 U                             |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    | 0.27 J                             |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    | 95 J                               |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    | 1.8 J                              |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    | 9.7 J                              |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    | 0.74 J                             |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    | 6400 J                             |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    | 0.83 U                             |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    | 0.96 J                             |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    | 0.89 J                             |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    | 2 J                                |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    | 1.8 J                              |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    | 2.1 J                              |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    | 0.16 UJ                            |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    | 1.2 J                              |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D11<br>Feb-05<br>0-6" bls | SS-SF/SB-D13<br>Feb-05<br>0-6" bls | SS-SF/SB-D15<br>Feb-05<br>0-6" bls | SS-SF/SB-D17<br>Feb-05<br>0-6" bls | SS-SF/SB-D21<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D11<br>Feb-05<br>0-6" bls | SS-SF/SB-D13<br>Feb-05<br>0-6" bls | SS-SF/SB-D15<br>Feb-05<br>0-6" bls | SS-SF/SB-D17<br>Feb-05<br>0-6" bls | SS-SF/SB-D21<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E06<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E10<br>Feb-05<br>0-6" bls | SS-SF/SB-E12<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 14000                              | 25000 J                            | 20000 J                            | 36000                              | 30000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.3 UR                             | 7.5 UR                             | 7.6 UR                             | 8.1 UR                             | 8.9 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 0.57 R                             | 0.83 R                             | 1.3 UR                             | 4.2 J                              | 1.6 J                              |
| Barium                             | 540                    |                          | 29                                 | 30                                 | 31                                 | 75                                 | 250                                |
| Beryllium                          | 15                     | 30                       | 0.24 UJ                            | 0.53 UJ                            | 0.45 UJ                            | 1.2 J                              | 0.49 UJ                            |
| Cadmium                            | 3.7                    | 7.4                      | 0.09 J                             | 0.62 U                             | 0.63 U                             | 0.41 J                             | 1                                  |
| Calcium                            |                        |                          | 170 J                              | 660 J                              | 580 J                              | 710                                | 4100                               |
| Chromium                           | 30                     | 30                       | 8.2 J                              | 20 J                               | 22 J                               | 26 J                               | 27 J                               |
| Cobalt                             | 900                    |                          | 1 J                                | 1.1 UJ                             | 1.1 UJ                             | 2.7 J                              | 2 J                                |
| Copper                             | 310                    | 620                      | 2.7 UJ                             | 9.9 J                              | 12 J                               | 41 J                               | 110 J                              |
| Iron                               | 2300                   |                          | 7400                               | 29000                              | 28000                              | 26000                              | 19000                              |
| Lead                               | 400                    | 400                      | 11                                 | 12 J                               | 9.7 J                              | 37                                 | 53                                 |
| Magnesium                          |                        |                          | 400 J                              | 540 J                              | 480 J                              | 840                                | 1800                               |
| Manganese                          | 180                    | 360                      | 61                                 | 69 J                               | 70 J                               | 190                                | 100                                |
| Mercury                            | 0.61                   | 4.6                      | 0.11 UJ                            | 0.11 UJ                            | 0.11 UJ                            | 0.24                               | 0.57                               |
| Nickel                             | 160                    | 320                      | 3.6 UJ                             | 7.4 J                              | 8.7 J                              | 7.2                                | 15                                 |
| Potassium                          |                        |                          | 330 J                              | 620 J                              | 590 J                              | 830                                | 1100                               |
| Selenium                           | 39                     | 78                       | 4.3 U                              | 1.9 R                              | 1.7 J                              | 4.7 U                              | 5.2 U                              |
| Silver                             | 39                     | 78                       | 1.2 U                              | 1.2 U                              | 1.3 U                              | 1.4 U                              | 1.5 U                              |
| Sodium                             |                        |                          | 62 UJ                              | 86 UJ                              | 89 UJ                              | 41 UJ                              | 240 UJ                             |
| Thallium                           | 0.52                   | 1.04                     | 3.1 U                              | 3.1 UJ                             | 3.2 UJ                             | 3.4 U                              | 3.7 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 21                                 | 74                                 | 66                                 | 74                                 | 47                                 |
| Zinc                               | 2300                   | 4600                     | 14 J                               | 61 J                               | 80 J                               | 65 J                               | 330 J                              |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E06<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E10<br>Feb-05<br>0-6" bls | SS-SF/SB-E12<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 7.2                                |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    | 51                                 |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 0.69 U                             |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.46 J                             |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 0.87 J                             |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.42 U                             |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 2.2 J                              |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 1.1 J                              |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.24 U                             |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    | 0.32 J                             |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.5 J                              |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.44 J                             |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    | 0.17 U                             |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    | 0.57                               |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    | 100 J                              |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 18 J                               |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    | 18 J                               |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    | 5.2 J                              |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    | 810                                |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    | 14 J                               |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 2.4 J                              |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 6 J                                |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    | 2.1 J                              |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    | 1.6 J                              |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    | 2 J                                |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 0.17 UJ                            |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 3.8 J                              |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E06<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E10<br>Feb-05<br>0-6" bls | SS-SF/SB-E12<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E06<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E08<br>Feb-05<br>0-6" bls | SS-SF/SB-E10<br>Feb-05<br>0-6" bls | SS-SF/SB-E12<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E14<br>Feb-05<br>0-6" bls | SS-SF/SB-E16<br>Feb-05<br>0-6" bls | SS-SF/SB-E18<br>Feb-05<br>0-6" bls | SS-SF/SB-E20<br>Feb-05<br>0-6" bls | SS-SF/SB-E22<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 13000                              | 12000                              | 24000                              | 8100                               | 14000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.9 UR                             | 8 UR                               | 7.6 UR                             | 9.2 UR                             | 7.4 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 1 R                                | 2.3 J                              | 3.1                                | 0.65 R                             | 1.6 J                              |
| Barium                             | 540                    |                          | 190                                | 85                                 | 54                                 | 54                                 | 69                                 |
| Beryllium                          | 15                     | 30                       | 0.26 UJ                            | 0.28 J                             | 0.59 J                             | 0.2 J                              | 0.31 J                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.21 J                             | 0.11 J                             | 0.63 U                             | 0.76 U                             | 0.62 U                             |
| Calcium                            |                        |                          | 2500                               | 1200                               | 900                                | 1800                               | 560 J                              |
| Chromium                           | 30                     | 30                       | 14 J                               | 14 J                               | 36 J                               | 8.6 J                              | 20 J                               |
| Cobalt                             | 900                    |                          | 1.7 J                              | 1.7 J                              | 2.7 J                              | 1.4 J                              | 3.3 J                              |
| Copper                             | 310                    | 620                      | 43 J                               | 32 J                               | 28 J                               | 7.6 J                              | 13 J                               |
| Iron                               | 2300                   |                          | 11000                              | 13000                              | 33000                              | 9000                               | 17000                              |
| Lead                               | 400                    | 400                      | 35 J                               | 24                                 | 17 J                               | 12                                 | 17                                 |
| Magnesium                          |                        |                          | 1400                               | 590 J                              | 1000                               | 690 J                              | 1600                               |
| Manganese                          | 180                    | 360                      | 100                                | 140                                | 130                                | 440                                | 220                                |
| Mercury                            | 0.61                   | 4.6                      | 0.19                               | 0.18                               | 0.13 U                             | 0.07 UJ                            | 0.12 U                             |
| Nickel                             | 160                    | 320                      | 10                                 | 7.7                                | 9.1                                | 3.6 UJ                             | 9                                  |
| Potassium                          |                        |                          | 740                                | 530 J                              | 880                                | 540 J                              | 1400                               |
| Selenium                           | 39                     | 78                       | 4.6 U                              | 4.6 U                              | 2.2 R                              | 5.3 U                              | 1.9 J                              |
| Silver                             | 39                     | 78                       | 1.3 U                              | 1.3 U                              | 1.3 U                              | 1.5 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 140 UJ                             | 110 UJ                             | 58 UJ                              | 100 UJ                             | 100 UJ                             |
| Thallium                           | 0.52                   | 1.04                     | 3.3 U                              | 3.3 U                              | 3.2 U                              | 3.8 U                              | 3.1 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 26                                 | 31                                 | 75                                 | 22                                 | 40                                 |
| Zinc                               | 2300                   | 4600                     | 140 J                              | 130 J                              | 41 J                               | 35 J                               | 25 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E14<br>Feb-05<br>0-6" bls | SS-SF/SB-E16<br>Feb-05<br>0-6" bls | SS-SF/SB-E18<br>Feb-05<br>0-6" bls | SS-SF/SB-E20<br>Feb-05<br>0-6" bls | SS-SF/SB-E22<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          | 7.5                                |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          | 71                                 |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          | 0.5 U                              |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.52 J                             |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 1 J                                |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.52 J                             |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 4.9                                |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 2.2 J                              |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.3 J                              |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          | 0.56 J                             |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.77 J                             |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.71 U                             |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        | 0.19 U                             |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          | 0.5                                |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          | 150 J                              |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          | 18 J                               |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          | 37 J                               |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          | 12 J                               |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          | 2500                               |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          | 12                                 |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          | 4.2 J                              |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          | 11 J                               |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          | 3.1 J                              |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          | 2.4 J                              |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          | 3.3 J                              |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          | 0.19 UJ                            |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          | 3.9 J                              |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E14<br>Feb-05<br>0-6" bls | SS-SF/SB-E16<br>Feb-05<br>0-6" bls | SS-SF/SB-E18<br>Feb-05<br>0-6" bls | SS-SF/SB-E20<br>Feb-05<br>0-6" bls | SS-SF/SB-E22<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E14<br>Feb-05<br>0-6" bls | SS-SF/SB-E16<br>Feb-05<br>0-6" bls | SS-SF/SB-E18<br>Feb-05<br>0-6" bls | SS-SF/SB-E20<br>Feb-05<br>0-6" bls | SS-SF/SB-E22<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E24<br>Feb-05<br>0-6" bls | SS-SF/SB-F05<br>Feb-05<br>0-6" bls | SS-SF/SB-F07<br>Feb-05<br>0-6" bls | SS-SF/SB-F09<br>Feb-05<br>0-6" bls | SS-SF/SB-F11<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 18000                              | 64000                              | 67000                              | 39000                              | 36000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.4 UR                             | 7.8 UR                             | 7.3 UR                             | 7.6 UR                             | 8 UR                               |
| Arsenic                            | 0.39                   | 4.4                      | 2.2                                | 2.2 J                              | 1.2 U                              | 1.3 UR                             | 2.3                                |
| Barium                             | 540                    |                          | 23 J                               | 40                                 | 86                                 | 52                                 | 57                                 |
| Beryllium                          | 15                     | 30                       | 0.28 J                             | 0.75 J                             | 0.93                               | 0.63 J                             | 0.53 UJ                            |
| Cadmium                            | 3.7                    | 7.4                      | 0.62 U                             | 0.4 J                              | 0.15 J                             | 0.64 U                             | 0.67 U                             |
| Calcium                            |                        |                          | 240 J                              | 280 J                              | 290 J                              | 310 J                              | 450 J                              |
| Chromium                           | 30                     | 30                       | 18 J                               | 39 J                               | 33 J                               | 20 J                               | 18 J                               |
| Cobalt                             | 900                    |                          | 1.4 J                              | 3.1 J                              | 8.4 J                              | 5.9 J                              | 2.1 J                              |
| Copper                             | 310                    | 620                      | 12 J                               | 19 J                               | 9.3 J                              | 11 J                               | 17 J                               |
| Iron                               | 2300                   |                          | 22000                              | 38000                              | 26000                              | 25000                              | 28000                              |
| Lead                               | 400                    | 400                      | 5.6 J                              | 15                                 | 14 J                               | 12 J                               | 16 J                               |
| Magnesium                          |                        |                          | 400 J                              | 1000                               | 7700                               | 2400                               | 920                                |
| Manganese                          | 180                    | 360                      | 79                                 | 88                                 | 340                                | 230                                | 99                                 |
| Mercury                            | 0.61                   | 4.6                      | 0.12 U                             | 0.07 UJ                            | 0.07 UJ                            | 0.06 UJ                            | 0.08 UJ                            |
| Nickel                             | 160                    | 320                      | 4.4 UJ                             | 13                                 | 21                                 | 10                                 | 11                                 |
| Potassium                          |                        |                          | 330 J                              | 930                                | 6300                               | 1600                               | 1200                               |
| Selenium                           | 39                     | 78                       | 1.5 R                              | 4.5 U                              | 1.8 R                              | 4.5 U                              | 2.1 R                              |
| Silver                             | 39                     | 78                       | 1.2 U                              | 1.3 U                              | 1.2 U                              | 1.3 U                              | 1.3 U                              |
| Sodium                             |                        |                          | 75 UJ                              | 33 UJ                              | 92 UJ                              | 66 UJ                              | 89 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.1 U                              | 3.2 U                              | 3 U                                | 3.2 U                              | 3.3 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 55                                 | 98                                 | 68                                 | 55                                 | 67                                 |
| Zinc                               | 2300                   | 4600                     | 11 J                               | 23 J                               | 44 J                               | 34 J                               | 56 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E24<br>Feb-05<br>0-6" bls | SS-SF/SB-F05<br>Feb-05<br>0-6" bls | SS-SF/SB-F07<br>Feb-05<br>0-6" bls | SS-SF/SB-F09<br>Feb-05<br>0-6" bls | SS-SF/SB-F11<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    | 0.26 U                             |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    | 6.4                                |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    | 0.43 U                             |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    | 0.18 U                             |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    | 0.29 U                             |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    | 0.18 U                             |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    | 0.35 U                             |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    | 0.31 U                             |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    | 0.11 U                             |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    | 0.15 U                             |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    | 0.19 U                             |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    | 0.1 U                              |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    | 0.15 U                             |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    | 0.19 U                             |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    | 13 J                               |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    | 0.33 UJ                            |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    | 0.3 UJ                             |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    | 0.21 UJ                            |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    | 1800                               |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    | 0.64 U                             |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    | 0.15 UJ                            |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    | 0.1 UJ                             |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    | 0.93 J                             |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    | 0.79 J                             |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    | 0.81 J                             |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    | 0.15 UJ                            |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    | 0.19 UJ                            |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

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Sigmon's Septic Tank Site  
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|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E24<br>Feb-05<br>0-6" bls | SS-SF/SB-F05<br>Feb-05<br>0-6" bls | SS-SF/SB-F07<br>Feb-05<br>0-6" bls | SS-SF/SB-F09<br>Feb-05<br>0-6" bls | SS-SF/SB-F11<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E24<br>Feb-05<br>0-6" bls | SS-SF/SB-F05<br>Feb-05<br>0-6" bls | SS-SF/SB-F07<br>Feb-05<br>0-6" bls | SS-SF/SB-F09<br>Feb-05<br>0-6" bls | SS-SF/SB-F11<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F13<br>Feb-05<br>0-6" bls | SS-SF/SB-F15<br>Feb-05<br>0-6" bls | SS-SF/SB-F17<br>Feb-05<br>0-6" bls | SS-SF/SB-F19<br>Feb-05<br>0-6" bls | SS-SF/SB-F21<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 19000                              | 14000                              | 23000                              | 25000                              | 23000                              |
| Antimony                           | 3.1                    | 6.2                      | 8.1 UR                             | 8.3 UR                             | 0.64 UJ                            | 8.7 UR                             | 7.8 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 1.2 UJ                             | 1.2 R                              | 0.53 R                             | 0.99 R                             | 1.6 UJ                             |
| Barium                             | 540                    |                          | 160                                | 130                                | 68                                 | 53                                 | 76                                 |
| Beryllium                          | 15                     | 30                       | 0.34 UJ                            | 0.29 J                             | 0.71                               | 0.55 J                             | 0.43 J                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.69                               | 0.38 J                             | 0.64 U                             | 0.73 U                             | 0.65 U                             |
| Calcium                            |                        |                          | 2700                               | 3000                               | 640 J                              | 870                                | 2000                               |
| Chromium                           | 30                     | 30                       | 20 J                               | 20 J                               | 19 J                               | 23 J                               | 18 J                               |
| Cobalt                             | 900                    |                          | 2.4 J                              | 1.8 J                              | 3.9 J                              | 11 J                               | 5.1 J                              |
| Copper                             | 310                    | 620                      | 73 J                               | 61 J                               | 11 J                               | 20 J                               | 15 J                               |
| Iron                               | 2300                   |                          | 14000                              | 12000                              | 21000                              | 28000                              | 22000                              |
| Lead                               | 400                    | 400                      | 40                                 | 33 J                               | 7.3 J                              | 13 J                               | 32 J                               |
| Magnesium                          |                        |                          | 1300                               | 1100                               | 1200                               | 900                                | 1100                               |
| Manganese                          | 180                    | 360                      | 100                                | 95                                 | 220                                | 500                                | 290                                |
| Mercury                            | 0.61                   | 4.6                      | 0.34                               | 0.32                               | 0.05 UJ                            | 0.08 UJ                            | 0.06 UJ                            |
| Nickel                             | 160                    | 320                      | 22                                 | 9.7                                | 7.9                                | 8.7                                | 6.6                                |
| Potassium                          |                        |                          | 720                                | 550 J                              | 1100                               | 970                                | 1200                               |
| Selenium                           | 39                     | 78                       | 4.7 U                              | 4.8 U                              | 4.5 U                              | 5.1 U                              | 2.2 UJ                             |
| Silver                             | 39                     | 78                       | 0.31 J                             | 0.28 R                             | 1.3 U                              | 1.5 U                              | 1.3 U                              |
| Sodium                             |                        |                          | 140 UJ                             | 210 UJ                             | 69 UJ                              | 55 UJ                              | 59 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.4 U                              | 3.4 U                              | 3.2 U                              | 3.6 U                              | 3.2 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 32                                 | 28                                 | 53                                 | 74                                 | 56                                 |
| Zinc                               | 2300                   | 4600                     | 220 J                              | 230 J                              | 25 J                               | 28                                 | 66 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F13<br>Feb-05<br>0-6" bls | SS-SF/SB-F15<br>Feb-05<br>0-6" bls | SS-SF/SB-F17<br>Feb-05<br>0-6" bls | SS-SF/SB-F19<br>Feb-05<br>0-6" bls | SS-SF/SB-F21<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F13<br>Feb-05<br>0-6" bls | SS-SF/SB-F15<br>Feb-05<br>0-6" bls | SS-SF/SB-F17<br>Feb-05<br>0-6" bls | SS-SF/SB-F19<br>Feb-05<br>0-6" bls | SS-SF/SB-F21<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA.-SITOSTEROL                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOLEAN-8-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOLEAN-14-EN-3-ONE                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F13<br>Feb-05<br>0-6" bls | SS-SF/SB-F15<br>Feb-05<br>0-6" bls | SS-SF/SB-F17<br>Feb-05<br>0-6" bls | SS-SF/SB-F19<br>Feb-05<br>0-6" bls | SS-SF/SB-F21<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F23<br>Feb-05<br>0-6" bls | SS-SF/SB-G02<br>Feb-05<br>0-6" bls | SS-SF/SB-G06<br>Feb-05<br>0-6" bls | SS-SF/SB-G08<br>Feb-05<br>0-6" bls | SS-SF/SB-G10<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 16000                              | 4000                               | 56000                              | 72000                              | 60000                              |
| Antimony                           | 3.1                    | 6.2                      | 7 UR                               | 0.84 UJ                            | 8.1 UR                             | 7.6 UR                             | 8.9 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 1.2 UR                             | 1.2 U                              | 1.8 J                              | 0.87 R                             | 1.7 J                              |
| Barium                             | 540                    |                          | 91                                 | 16 J                               | 150                                | 140                                | 190                                |
| Beryllium                          | 15                     | 30                       | 0.28 J                             | 0.08 J                             | 0.86                               | 1.1                                | 1.2 J                              |
| Cadmium                            | 3.7                    | 7.4                      | 0.59 U                             | 0.62 U                             | 0.67 U                             | 0.3 J                              | 1.3                                |
| Calcium                            |                        |                          | 1300                               | 210 J                              | 880                                | 380 J                              | 1500                               |
| Chromium                           | 30                     | 30                       | 27 J                               | 3.2 J                              | 42 J                               | 29 J                               | 37 J                               |
| Cobalt                             | 900                    |                          | 5.3 J                              | 0.43 J                             | 5.8 J                              | 7.2 J                              | 14 J                               |
| Copper                             | 310                    | 620                      | 64 J                               | 1.2 J                              | 22 J                               | 36 J                               | 150 J                              |
| Iron                               | 2300                   |                          | 18000                              | 3500                               | 31000                              | 29000                              | 32000                              |
| Lead                               | 400                    | 400                      | 94 J                               | 6.6                                | 25 J                               | 44 J                               | 43                                 |
| Magnesium                          |                        |                          | 2400                               | 150 J                              | 4200                               | 6100                               | 6400                               |
| Manganese                          | 180                    | 360                      | 180                                | 40                                 | 260                                | 280                                | 440                                |
| Mercury                            | 0.61                   | 4.6                      | 0.04 UJ                            | 0.05 UJ                            | 0.1 U                              | 0.24                               | 0.18                               |
| Nickel                             | 160                    | 320                      | 13                                 | 1.3 UJ                             | 14                                 | 17                                 | 30                                 |
| Potassium                          |                        |                          | 1900                               | 240 J                              | 3600                               | 5500                               | 5100                               |
| Selenium                           | 39                     | 78                       | 4.1 U                              | 4.4 U                              | 1.7 R                              | 4.4 U                              | 5.2 U                              |
| Silver                             | 39                     | 78                       | 1.2 U                              | 1.2 U                              | 1.3 U                              | 0.23 R                             | 1.5 U                              |
| Sodium                             |                        |                          | 97 UJ                              | 87 UJ                              | 77 UJ                              | 100 UJ                             | 170 UJ                             |
| Thallium                           | 0.52                   | 1.04                     | 2.9 U                              | 3.1 U                              | 3.4 U                              | 3.2 U                              | 3.7 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 44                                 | 9.2                                | 78                                 | 70                                 | 70                                 |
| Zinc                               | 2300                   | 4600                     | 63 J                               | 5.2 UJ                             | 66 J                               | 95 J                               | 220 J                              |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F23<br>Feb-05<br>0-6" bls | SS-SF/SB-G02<br>Feb-05<br>0-6" bls | SS-SF/SB-G06<br>Feb-05<br>0-6" bls | SS-SF/SB-G08<br>Feb-05<br>0-6" bls | SS-SF/SB-G10<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 2.5                                |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    | 25                                 |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 0.5 U                              |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.3 U                              |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 0.31 U                             |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.31 U                             |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 0.82 J                             |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 0.6 J                              |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.14 U                             |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    | 0.2 U                              |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.32 U                             |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.25 J                             |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    | 0.13 U                             |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    | 0.19 J                             |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 57 J                               |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 6.3 J                              |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    | 6.7 J                              |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    | 2.3 J                              |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    | 720                                |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    | 4.4 J                              |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 0.63 J                             |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 1.2 J                              |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    | 1.1 J                              |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    | 0.92 J                             |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    | 1.2 J                              |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 0.13 UJ                            |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 0.19 J                             |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F23<br>Feb-05<br>0-6" bls | SS-SF/SB-G02<br>Feb-05<br>0-6" bls | SS-SF/SB-G06<br>Feb-05<br>0-6" bls | SS-SF/SB-G08<br>Feb-05<br>0-6" bls | SS-SF/SB-G10<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F23<br>Feb-05<br>0-6" bls | SS-SF/SB-G02<br>Feb-05<br>0-6" bls | SS-SF/SB-G06<br>Feb-05<br>0-6" bls | SS-SF/SB-G08<br>Feb-05<br>0-6" bls | SS-SF/SB-G10<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G14<br>Feb-05<br>0-6" bls | SS-SF/SB-G16<br>Feb-05<br>0-6" bls | SS-SF/SB-G18<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 22000                              | 21000                              | 16000                              | 26000 J                            | 31000                              |
| Antimony                           | 3.1                    | 6.2                      | 8.2 UR                             | 8.4 UR                             | 8.5 UR                             | 3 UJ                               | 0.62 UJ                            |
| Arsenic                            | 0.39                   | 4.4                      | 1.9 J                              | 1.3 J                              | 1.2 J                              | 1.2 UR                             | 1.2 R                              |
| Barium                             | 540                    |                          | 20 J                               | 17 J                               | 240                                | 130                                | 150                                |
| Beryllium                          | 15                     | 30                       | 0.67 UJ                            | 0.59 UJ                            | 0.34 UJ                            | 1.6                                | 1.3                                |
| Cadmium                            | 3.7                    | 7.4                      | 0.68 U                             | 0.7 U                              | 0.67 J                             | 0.61 U                             | 0.67 U                             |
| Calcium                            |                        |                          | 210 J                              | 190 J                              | 2400                               | 1600 J                             | 1100                               |
| Chromium                           | 30                     | 30                       | 24 J                               | 17 J                               | 33 J                               | 34 J                               | 38 J                               |
| Cobalt                             | 900                    |                          | 0.95 J                             | 0.71 J                             | 2.3 J                              | 16 J                               | 9.3 J                              |
| Copper                             | 310                    | 620                      | 6.2 J                              | 4.8 J                              | 68 J                               | 38 J                               | 18 J                               |
| Iron                               | 2300                   |                          | 28000                              | 26000                              | 14000                              | 82000                              | 33000                              |
| Lead                               | 400                    | 400                      | 14 J                               | 12 J                               | 36                                 | 15 J                               | 14 J                               |
| Magnesium                          |                        |                          | 970                                | 920                                | 1100                               | 2500 J                             | 3700                               |
| Manganese                          | 180                    | 360                      | 110                                | 130                                | 110                                | 770 J                              | 520                                |
| Mercury                            | 0.61                   | 4.6                      | 0.04 UJ                            | 0.1 U                              | 0.75                               | 0.1 UJ                             | 0.06 UJ                            |
| Nickel                             | 160                    | 320                      | 5.7                                | 5 UJ                               | 30                                 | 14 J                               | 15                                 |
| Potassium                          |                        |                          | 900                                | 700                                | 850                                | 3200                               | 2600                               |
| Selenium                           | 39                     | 78                       | 1.5 J                              | 1.9 J                              | 4.9 U                              | 5.7 U                              | 4.7 U                              |
| Silver                             | 39                     | 78                       | 1.4 U                              | 1.4 U                              | 0.23 J                             | 1.2 U                              | 1.3 U                              |
| Sodium                             |                        |                          | 55 UJ                              | 48 UJ                              | 150 UJ                             | 67 UJ                              | 97 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.4 U                              | 3.5 U                              | 3.5 U                              | 3.1 UJ                             | 3.3 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 70                                 | 69                                 | 34                                 | 210                                | 72                                 |
| Zinc                               | 2300                   | 4600                     | 22 J                               | 20 J                               | 250 J                              | 53 J                               | 56 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G14<br>Feb-05<br>0-6" bls | SS-SF/SB-G16<br>Feb-05<br>0-6" bls | SS-SF/SB-G18<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G14<br>Feb-05<br>0-6" bls | SS-SF/SB-G16<br>Feb-05<br>0-6" bls | SS-SF/SB-G18<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
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|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G12<br>Feb-05<br>0-6" bls | SS-SF/SB-G14<br>Feb-05<br>0-6" bls | SS-SF/SB-G16<br>Feb-05<br>0-6" bls | SS-SF/SB-G18<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G20<br>Feb-05<br>0-6" bls | SS-SF/SB-G22<br>Feb-05<br>0-6" bls | SS-SF/SB-G24<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 16000                              | 25000                              | 13000                              | 24000                              | 23000                              |
| Antimony                           | 3.1                    | 6.2                      | 0.83 UJ                            | 0.6 UJ                             | 7.7 UR                             | 7.9 UR                             | 7.9 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 1.5 UR                             | 1.3 UR                             | 1.3                                | 2 J                                | 1.6                                |
| Barium                             | 540                    |                          | 84                                 | 40                                 | 29                                 | 46                                 | 47                                 |
| Beryllium                          | 15                     | 30                       | 0.35 J                             | 0.37 J                             | 0.26 J                             | 0.34 UJ                            | 0.32 UJ                            |
| Cadmium                            | 3.7                    | 7.4                      | 0.74 U                             | 0.63 U                             | 0.64 U                             | 0.65 U                             | 0.66 U                             |
| Calcium                            |                        |                          | 2600                               | 1400                               | 410 J                              | 290 J                              | 340 J                              |
| Chromium                           | 30                     | 30                       | 16 J                               | 23 J                               | 12 J                               | 17 J                               | 16 J                               |
| Cobalt                             | 900                    |                          | 2.9 J                              | 1.2 J                              | 1.1 J                              | 1.7 J                              | 1.6 J                              |
| Copper                             | 310                    | 620                      | 19 J                               | 9.2 J                              | 5.6 J                              | 8.6 J                              | 7.9 J                              |
| Iron                               | 2300                   |                          | 16000                              | 30000                              | 16000                              | 18000                              | 17000                              |
| Lead                               | 400                    | 400                      | 22 J                               | 16 J                               | 14 J                               | 17 J                               | 15 J                               |
| Magnesium                          |                        |                          | 1400                               | 910                                | 370 J                              | 550 J                              | 530 J                              |
| Manganese                          | 180                    | 360                      | 330                                | 110                                | 92                                 | 180                                | 190                                |
| Mercury                            | 0.61                   | 4.6                      | 0.1 UJ                             | 0.09 UJ                            | 0.13 U                             | 0.04 UJ                            | 0.07 UJ                            |
| Nickel                             | 160                    | 320                      | 7.3                                | 4.5 UJ                             | 3.4 UJ                             | 5 UJ                               | 4.8 UJ                             |
| Potassium                          |                        |                          | 1000                               | 610 J                              | 470 J                              | 600 J                              | 570 J                              |
| Selenium                           | 39                     | 78                       | 5.2 U                              | 2.3 UJ                             | 4.5 U                              | 4.6 U                              | 4.6 U                              |
| Silver                             | 39                     | 78                       | 1.5 U                              | 1.3 U                              | 1.3 U                              | 1.3 U                              | 1.3 U                              |
| Sodium                             |                        |                          | 92 UJ                              | 44 UJ                              | 78 UJ                              | 65 UJ                              | 49 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.7 U                              | 3.2 U                              | 3.2 U                              | 3.3 U                              | 3.3 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 41                                 | 80                                 | 41                                 | 46                                 | 43                                 |
| Zinc                               | 2300                   | 4600                     | 76 J                               | 40                                 | 25 J                               | 40 J                               | 39 UJ                              |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G20<br>Feb-05<br>0-6" bls | SS-SF/SB-G22<br>Feb-05<br>0-6" bls | SS-SF/SB-G24<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    | 4.7                                |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    | 14                                 |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    | 0.54 U                             |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    | 0.33 J                             |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    | 0.32 U                             |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    | 0.4 J                              |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    | 0.75 U                             |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    | 0.35 U                             |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    | 0.17 U                             |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    | 0.24 U                             |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    | 0.39 J                             |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    | 0.15 U                             |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    | 0.19 U                             |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    | 0.29 J                             |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    | 31 J                               |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    | 8.6 J                              |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    | 4.7 J                              |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    | 1.1 J                              |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    | 850                                |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    | 5.3                                |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    | 0.75 J                             |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    | 1.5 J                              |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    | 1.2 J                              |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    | 1 J                                |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    | 1.1 J                              |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    | 0.19 UJ                            |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    | 0.32 J                             |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

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Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G20<br>Feb-05<br>0-6" bls | SS-SF/SB-G22<br>Feb-05<br>0-6" bls | SS-SF/SB-G24<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOLEAN-8-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOLEAN-14-EN-3-ONE                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G20<br>Feb-05<br>0-6" bls | SS-SF/SB-G22<br>Feb-05<br>0-6" bls | SS-SF/SB-G24<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls | SS-SF/SB-H05<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    | NA                                 |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    | NA                                 |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    | NA                                 |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    | NA                                 |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    | NA                                 |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    | NA                                 |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    | NA                                 |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    | NA                                 |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    | NA                                 |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H07<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 31000                              | 50000                              | 46000                              | 23000                              | 21000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.7 UR                             | 8.4 UR                             | 0.86 UJ                            | 3.2 UJ                             | 1.6 UJ                             |
| Arsenic                            | 0.39                   | 4.4                      | 0.88 R                             | 1.7 J                              | 0.96 R                             | 1.4 J                              | 1 J                                |
| Barium                             | 540                    |                          | 190                                | 220                                | 210                                | 320                                | 220                                |
| Beryllium                          | 15                     | 30                       | 0.56 UJ                            | 1                                  | 0.88                               | 0.61                               | 0.58 J                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.18 J                             | 2.3                                | 2                                  | 0.15 J                             | 0.09 R                             |
| Calcium                            |                        |                          | 970                                | 3200                               | 2600                               | 650                                | 650                                |
| Chromium                           | 30                     | 30                       | 26 J                               | 67 J                               | 61 J                               | 32 J                               | 17 J                               |
| Cobalt                             | 900                    |                          | 4.8 J                              | 14 J                               | 13 J                               | 4.3 J                              | 3.5 J                              |
| Copper                             | 310                    | 620                      | 33 J                               | 140 J                              | 130 J                              | 17 J                               | 16 J                               |
| Iron                               | 2300                   |                          | 15000                              | 31000                              | 28000                              | 17000                              | 15000                              |
| Lead                               | 400                    | 400                      | 21 J                               | 90 J                               | 84 J                               | 19                                 | 13 J                               |
| Magnesium                          |                        |                          | 2400                               | 6000                               | 4900                               | 4100                               | 3300                               |
| Manganese                          | 180                    | 360                      | 150                                | 410                                | 330                                | 180                                | 200                                |
| Mercury                            | 0.61                   | 4.6                      | 0.1                                | 0.25                               | 0.48                               | 0.1 UJ                             | 0.09 UJ                            |
| Nickel                             | 160                    | 320                      | 14                                 | 82                                 | 77                                 | 15                                 | 9.8                                |
| Potassium                          |                        |                          | 1800                               | 4600                               | 3800                               | 2500                               | 2100                               |
| Selenium                           | 39                     | 78                       | 4.5 U                              | 2.1 R                              | 1.9 R                              | 4.1 U                              | 4.2 U                              |
| Silver                             | 39                     | 78                       | 1.3 U                              | 3.6                                | 3.7                                | 1.2 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 85 UJ                              | 300 UJ                             | 260 UJ                             | 140 UJ                             | 120 UJ                             |
| Thallium                           | 0.52                   | 1.04                     | 3.2 U                              | 3.5 U                              | 3.3 U                              | 2.9 U                              | 3 U                                |
| Vanadium                           | 7.8                    | 15.6                     | 36                                 | 66                                 | 59                                 | 46                                 | 34                                 |
| Zinc                               | 2300                   | 4600                     | 68 J                               | 390 J                              | 340 J                              | 64 J                               | 61 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H07<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 0.68 U                             | 3.4                                |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    | 54                                 | 41                                 |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    | 4.4                                | 0.54 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.47 U                             | 0.28 J                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 0.52 U                             | 0.39 U                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.47 U                             | 0.36 J                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 4.8                                | 3.8                                |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    | 2 J                                | 1.4 J                              |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.15 U                             | 0.27 J                             |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    | 0.59 J                             | 0.37 J                             |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    | 0.73 J                             | 0.48 J                             |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    | 0.78 J                             | 0.54 J                             |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    | 0.14 U                             | 0.14 U                             |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    | 0.4 J                              | 0.28 J                             |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 110 J                              | 82 J                               |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 10 J                               | 7.9 J                              |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    | 23 J                               | 23 J                               |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    | 7.6 J                              | 6.3 J                              |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    | 830                                | 660                                |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    | 5                                  | 3.8 J                              |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 1.5 J                              | 1.7 J                              |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 13 J                               | 10 J                               |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    | 2.6 J                              | 1.8 J                              |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    | 1.9 J                              | 1.3 J                              |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    | 2.8 J                              | 2 J                                |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    | 0.14 UJ                            | 0.14 UJ                            |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    | 3.4 J                              | 1.7 J                              |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H07<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H07<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H09<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls | SS-SF/SB-H11<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H13<br>Feb-05<br>0-6" bls | SS-SF/SB-H15<br>Feb-05<br>0-6" bls | SS-SF/SB-H17<br>Feb-05<br>0-6" bls | SS-SF/SB-H19<br>Feb-05<br>0-6" bls | SS-SF/SB-H21<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 11000                              | 20000                              | 19000                              | 18000                              | 59000 J                            |
| Antimony                           | 3.1                    | 6.2                      | 4 UJ                               | 2.5 UJ                             | 1.1 UJ                             | 7.3 UR                             | 1.1 UJ                             |
| Arsenic                            | 0.39                   | 4.4                      | 1.1 R                              | 2.1 J                              | 1.3 UR                             | 0.9 R                              | 1.2 UR                             |
| Barium                             | 540                    |                          | 560                                | 450                                | 19 J                               | 150                                | 110                                |
| Beryllium                          | 15                     | 30                       | 0.23 UJ                            | 0.65                               | 0.63 J                             | 0.35 J                             | 1.1                                |
| Cadmium                            | 3.7                    | 7.4                      | 0.61 U                             | 0.6 U                              | 0.63 U                             | 0.61 U                             | 0.29 J                             |
| Calcium                            |                        |                          | 720                                | 2600                               | 140 J                              | 1300                               | 600 J                              |
| Chromium                           | 30                     | 30                       | 22 J                               | 45 J                               | 10 J                               | 17 J                               | 16 J                               |
| Cobalt                             | 900                    |                          | 2 J                                | 5.2 J                              | 0.3 J                              | 2.7 J                              | 7.2 J                              |
| Copper                             | 310                    | 620                      | 25 J                               | 40 J                               | 7.4 J                              | 13 J                               | 9.9 J                              |
| Iron                               | 2300                   |                          | 10000                              | 26000                              | 24000                              | 15000                              | 27000                              |
| Lead                               | 400                    | 400                      | 20 J                               | 28 J                               | 12 J                               | 29 J                               | 11 J                               |
| Magnesium                          |                        |                          | 1100                               | 3700                               | 610 J                              | 880                                | 5400 J                             |
| Manganese                          | 180                    | 360                      | 110                                | 240                                | 51                                 | 370                                | 290 J                              |
| Mercury                            | 0.61                   | 4.6                      | 0.09 UJ                            | 0.13                               | 0.13 U                             | 0.07 UJ                            | 0.12 U                             |
| Nickel                             | 160                    | 320                      | 7.8                                | 20                                 | 2.4 UJ                             | 5.9                                | 9.3 J                              |
| Potassium                          |                        |                          | 790                                | 3100                               | 800                                | 720                                | 3900                               |
| Selenium                           | 39                     | 78                       | 4.3 U                              | 4.2 U                              | 1.3 UJ                             | 4.3 U                              | 4.1 U                              |
| Silver                             | 39                     | 78                       | 1.2 U                              | 1.2 U                              | 1.3 U                              | 1.2 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 92 UJ                              | 180 UJ                             | 44 UJ                              | 70 UJ                              | 95 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3 U                                | 3 U                                | 3.2 U                              | 3.1 U                              | 3 UJ                               |
| Vanadium                           | 7.8                    | 15.6                     | 24                                 | 60                                 | 60                                 | 36                                 | 59                                 |
| Zinc                               | 2300                   | 4600                     | 74 J                               | 130 J                              | 10 J                               | 80 J                               | 52 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H13<br>Feb-05<br>0-6" bls | SS-SF/SB-H15<br>Feb-05<br>0-6" bls | SS-SF/SB-H17<br>Feb-05<br>0-6" bls | SS-SF/SB-H19<br>Feb-05<br>0-6" bls | SS-SF/SB-H21<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H13<br>Feb-05<br>0-6" bls | SS-SF/SB-H15<br>Feb-05<br>0-6" bls | SS-SF/SB-H17<br>Feb-05<br>0-6" bls | SS-SF/SB-H19<br>Feb-05<br>0-6" bls | SS-SF/SB-H21<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H13<br>Feb-05<br>0-6" bls | SS-SF/SB-H15<br>Feb-05<br>0-6" bls | SS-SF/SB-H17<br>Feb-05<br>0-6" bls | SS-SF/SB-H19<br>Feb-05<br>0-6" bls | SS-SF/SB-H21<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H23<br>Feb-05<br>0-6" bls | SS-SF/SB-I06<br>Feb-05<br>0-6" bls | SS-SF/SB-I06<br>Feb-05<br>0-6" bls | SS-SF/SB-I08<br>Feb-05<br>0-6" bls | SS-SF/SB-I10<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 22000                              | 29000                              | 46000                              | 15000                              | 57000                              |
| Antimony                           | 3.1                    | 6.2                      | 0.66 UJ                            | 7.5 UR                             | 7.9 UR                             | 7.8 UR                             | 7.6 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 1.4 J                              | 2.2 J                              | 3.4 J                              | 1.6                                | 1.3 UR                             |
| Barium                             | 540                    |                          | 35                                 | 45                                 | 64                                 | 46                                 | 68                                 |
| Beryllium                          | 15                     | 30                       | 0.43 J                             | 0.43 UJ                            | 0.65 UJ                            | 0.29 J                             | 0.65 J                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.65 U                             | 0.21 J                             | 0.36 J                             | 0.19 J                             | 0.63 U                             |
| Calcium                            |                        |                          | 1400                               | 1700                               | 2900                               | 2700                               | 610 J                              |
| Chromium                           | 30                     | 30                       | 18 J                               | 16 J                               | 34 J                               | 18 J                               | 23 J                               |
| Cobalt                             | 900                    |                          | 1.8 J                              | 3 J                                | 3.6 J                              | 1.6 J                              | 4.3 J                              |
| Copper                             | 310                    | 620                      | 12 J                               | 9.1 J                              | 14 J                               | 4.7 J                              | 3.4 J                              |
| Iron                               | 2300                   |                          | 26000                              | 17000                              | 27000                              | 8100                               | 24000                              |
| Lead                               | 400                    | 400                      | 37 J                               | 14                                 | 21                                 | 6.8 J                              | 13 J                               |
| Magnesium                          |                        |                          | 840                                | 1200                               | 1900                               | 1100                               | 3300                               |
| Manganese                          | 180                    | 360                      | 140                                | 210                                | 260                                | 190                                | 170                                |
| Mercury                            | 0.61                   | 4.6                      | 0.08 UJ                            | 0.08 UJ                            | 0.05 UJ                            | 0.13 U                             | 0.06 UJ                            |
| Nickel                             | 160                    | 320                      | 5.2                                | 6.2                                | 9.5                                | 4.9 UJ                             | 13                                 |
| Potassium                          |                        |                          | 850                                | 1000                               | 1700                               | 430 J                              | 2000                               |
| Selenium                           | 39                     | 78                       | 1.7 UJ                             | 4.4 U                              | 4.6 U                              | 4.5 U                              | 1.4 UJ                             |
| Silver                             | 39                     | 78                       | 1.3 U                              | 1.2 U                              | 1.3 U                              | 1.3 U                              | 1.3 U                              |
| Sodium                             |                        |                          | 65 UJ                              | 55 UJ                              | 65 UJ                              | 96 UJ                              | 77 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.3 U                              | 3.1 U                              | 3.3 U                              | 3.2 U                              | 3.2 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 64                                 | 40                                 | 66                                 | 21                                 | 67                                 |
| Zinc                               | 2300                   | 4600                     | 28 J                               | 29 J                               | 45 J                               | 45 J                               | 21 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H23<br>Feb-05<br>0-6" bls | SS-SF/SB-I06<br>Feb-05<br>0-6" bls | SS-SF/SB-I06<br>Feb-05<br>0-6" bls | SS-SF/SB-I08<br>Feb-05<br>0-6" bls | SS-SF/SB-I10<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          | 8.6                                |                                    |                                    |                                    | 1.2 J                              |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          | 57                                 |                                    |                                    |                                    | 12                                 |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          | 0.55 U                             |                                    |                                    |                                    | 0.41 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.35 U                             |                                    |                                    |                                    | 0.28 U                             |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.51 J                             |                                    |                                    |                                    | 0.39 U                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.38 J                             |                                    |                                    |                                    | 0.28 U                             |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 1.3 J                              |                                    |                                    |                                    | 0.53 J                             |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          | 0.86 J                             |                                    |                                    |                                    | 0.69 J                             |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.16 U                             |                                    |                                    |                                    | 0.17 U                             |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          | 0.24 J                             |                                    |                                    |                                    | 0.26 U                             |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          | 0.51 J                             |                                    |                                    |                                    | 0.27 U                             |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          | 0.39 U                             |                                    |                                    |                                    | 0.18 U                             |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        | 3.7 J                              |                                    |                                    |                                    | 0.16 U                             |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          | 0.35 J                             |                                    |                                    |                                    | 0.37 J                             |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          | 110 J                              |                                    |                                    |                                    | 31 J                               |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          | 19 J                               |                                    |                                    |                                    | 1.7 J                              |
| Hexachlorodibenzodioxin (Total)                      |                        |                          | 12 J                               |                                    |                                    |                                    | 3.4 J                              |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          | 7.6 J                              |                                    |                                    |                                    | 0.59 J                             |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          | 13000 J                            |                                    |                                    |                                    | 890                                |
| OCTACHLORODIBENZOFURAN                               |                        |                          | 16                                 |                                    |                                    |                                    | 1.2 J                              |
| Pentachlorodibenzodioxin (Total)                     |                        |                          | 1.8 J                              |                                    |                                    |                                    | 0.26 UJ                            |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          | 3.5 J                              |                                    |                                    |                                    | 0.5 J                              |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          | 6.4 J                              |                                    |                                    |                                    | 1.3 J                              |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          | 6 J                                |                                    |                                    |                                    | 1 J                                |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          | 6.5 J                              |                                    |                                    |                                    | 1.1 J                              |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          | 3.7 J                              |                                    |                                    |                                    | 0.16 UJ                            |
| Tetrachlorodibenzofuran (Total)                      |                        |                          | 1.3 J                              |                                    |                                    |                                    | 0.37 J                             |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H23<br>Feb-05<br>0-6" bls | SS-SF/SB-106<br>Feb-05<br>0-6" bls | SS-SF/SB-106<br>Feb-05<br>0-6" bls | SS-SF/SB-108<br>Feb-05<br>0-6" bls | SS-SF/SB-110<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H23<br>Feb-05<br>0-6" bls | SS-SF/SB-I06<br>Feb-05<br>0-6" bls | SS-SF/SB-I06<br>Feb-05<br>0-6" bls | SS-SF/SB-I08<br>Feb-05<br>0-6" bls | SS-SF/SB-I10<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I12<br>Feb-05<br>0-6" bls | SS-SF/SB-I14<br>Feb-05<br>0-6" bls | SS-SF/SB-I16<br>Feb-05<br>0-6" bls | SS-SF/SB-I18<br>Feb-05<br>0-6" bls | SS-SF/SB-I20<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 9400                               | 7300                               | 17000                              | 18000 J                            | 8900 J                             |
| Antimony                           | 3.1                    | 6.2                      | 7.6 UR                             | 7.9 UR                             | 7.6 UR                             | 7.6 UJ                             | 7.4 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 0.55 R                             | 1.3 J                              | 1.5 J                              | 1.4 J                              | 1.2 J                              |
| Barium                             | 540                    |                          | 38 J                               | 20 J                               | 38                                 | 43                                 | 46 UJ                              |
| Beryllium                          | 15                     | 30                       | 0.3 J                              | 0.09 J                             | 0.32 J                             | 0.33 UJ                            | 0.2 UJ                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.63 U                             | 0.66 U                             | 0.63 U                             | 0.64 U                             | 0.62 U                             |
| Calcium                            |                        |                          | 120 J                              | 110 J                              | 1300                               | 520 J                              | 700 J                              |
| Chromium                           | 30                     | 30                       | 5 J                                | 5.5 J                              | 12 J                               | 15 J                               | 9.8 J                              |
| Cobalt                             | 900                    |                          | 3.2 J                              | 0.24 J                             | 1.5 J                              | 1.7 UJ                             | 1.6 UJ                             |
| Copper                             | 310                    | 620                      | 1.5 J                              | 2.1 J                              | 4.7 J                              | 5.9 J                              | 4.4 J                              |
| Iron                               | 2300                   |                          | 6200                               | 6000                               | 14000                              | 15000                              | 10000                              |
| Lead                               | 400                    | 400                      | 13 J                               | 15 J                               | 13 J                               | 12 J                               | 43                                 |
| Magnesium                          |                        |                          | 580 J                              | 180 J                              | 650                                | 460 J                              | 340 J                              |
| Manganese                          | 180                    | 360                      | 180                                | 24                                 | 140                                | 170 J                              | 130 J                              |
| Mercury                            | 0.61                   | 4.6                      | 0.07 UJ                            | 0.06 UJ                            | 0.12 UJ                            | 0.06 UJ                            | 0.11 UJ                            |
| Nickel                             | 160                    | 320                      | 2.7 UJ                             | 1.8 UJ                             | 4.7 UJ                             | 4.6 UJ                             | 3.1 UJ                             |
| Potassium                          |                        |                          | 330 J                              | 220 J                              | 460 J                              | 360 J                              | 380 J                              |
| Selenium                           | 39                     | 78                       | 4.4 U                              | 4.6 U                              | 4.4 U                              | 4.4 U                              | 4.3 U                              |
| Silver                             | 39                     | 78                       | 1.3 U                              | 1.3 U                              | 1.3 U                              | 1.3 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 70 UJ                              | 74 UJ                              | 74 UJ                              | 72 UJ                              | 69 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.1 U                              | 3.3 U                              | 3.2 U                              | 3.2 UJ                             | 3.1 UJ                             |
| Vanadium                           | 7.8                    | 15.6                     | 16                                 | 16                                 | 35                                 | 38                                 | 25                                 |
| Zinc                               | 2300                   | 4600                     | 12 J                               | 6.6 J                              | 19 J                               | 20 J                               | 17 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I12<br>Feb-05<br>0-6" bls | SS-SF/SB-I14<br>Feb-05<br>0-6" bls | SS-SF/SB-I16<br>Feb-05<br>0-6" bls | SS-SF/SB-I18<br>Feb-05<br>0-6" bls | SS-SF/SB-I20<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I12<br>Feb-05<br>0-6" bls | SS-SF/SB-I14<br>Feb-05<br>0-6" bls | SS-SF/SB-I16<br>Feb-05<br>0-6" bls | SS-SF/SB-I18<br>Feb-05<br>0-6" bls | SS-SF/SB-I20<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA-SITOSTEROL                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-112<br>Feb-05<br>0-6" bls | SS-SF/SB-114<br>Feb-05<br>0-6" bls | SS-SF/SB-116<br>Feb-05<br>0-6" bls | SS-SF/SB-118<br>Feb-05<br>0-6" bls | SS-SF/SB-120<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I22<br>Feb-05<br>0-6" bls | SS-SF/SB-I24<br>Feb-05<br>0-6" bls | SS-SF/SB-J03<br>Feb-05<br>0-6" bls | SS-SF/SB-J07<br>Feb-05<br>0-6" bls | SS-SF/SB-J23<br>Feb-05<br>0-6" bls |
|------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Aluminum                           | 7600                   |                          | 16000                              | 9400                               | 15000                              | 30000                              | 14000                              |
| Antimony                           | 3.1                    | 6.2                      | 7.8 UR                             | 8.1 UR                             | 7.3 UR                             | 7.8 UR                             | 7.4 UR                             |
| Arsenic                            | 0.39                   | 4.4                      | 1.3 UR                             | 0.82 R                             | 1.4                                | 2.4                                | 1.9                                |
| Barium                             | 540                    |                          | 32                                 | 68                                 | 38                                 | 46                                 | 31                                 |
| Beryllium                          | 15                     | 30                       | 0.19 J                             | 0.25 J                             | 0.33 J                             | 0.47 J                             | 0.25 J                             |
| Cadmium                            | 3.7                    | 7.4                      | 0.65 U                             | 0.67 U                             | 0.61 U                             | 0.11 R                             | 0.62 U                             |
| Calcium                            |                        |                          | 370 J                              | 850                                | 160 J                              | 4100                               | 180 J                              |
| Chromium                           | 30                     | 30                       | 15 J                               | 6.7 J                              | 11 J                               | 17 J                               | 9.4 J                              |
| Cobalt                             | 900                    |                          | 0.92 J                             | 2.7 J                              | 1.9 J                              | 1.9 J                              | 1.7 J                              |
| Copper                             | 310                    | 620                      | 6.7 J                              | 4.3 J                              | 4.6 J                              | 15 J                               | 6.5 J                              |
| Iron                               | 2300                   |                          | 15000                              | 7400                               | 9800                               | 24000                              | 13000                              |
| Lead                               | 400                    | 400                      | 13 J                               | 11                                 | 11 J                               | 14 J                               | 8.4 J                              |
| Magnesium                          |                        |                          | 640 J                              | 400 J                              | 430 J                              | 2700                               | 330 J                              |
| Manganese                          | 180                    | 360                      | 96                                 | 490                                | 190                                | 170                                | 75                                 |
| Mercury                            | 0.61                   | 4.6                      | 0.05 UJ                            | 0.11 U                             | 0.12 U                             | 0.05 UJ                            | 0.12 U                             |
| Nickel                             | 160                    | 320                      | 4.3 UJ                             | 3.2 UJ                             | 3.6 UJ                             | 5.2 UJ                             | 2.8 UJ                             |
| Potassium                          |                        |                          | 500 J                              | 420 J                              | 390 J                              | 1400                               | 530 J                              |
| Selenium                           | 39                     | 78                       | 4.5 U                              | 4.7 U                              | 4.2 U                              | 2.8 J                              | 4.3 U                              |
| Silver                             | 39                     | 78                       | 1.3 U                              | 1.3 U                              | 1.2 U                              | 1.3 U                              | 1.2 U                              |
| Sodium                             |                        |                          | 54 UJ                              | 100 UJ                             | 66 UJ                              | 84 UJ                              | 83 UJ                              |
| Thallium                           | 0.52                   | 1.04                     | 3.2 U                              | 3.4 U                              | 3 U                                | 3.3 U                              | 3.1 U                              |
| Vanadium                           | 7.8                    | 15.6                     | 37                                 | 17                                 | 24                                 | 53                                 | 29                                 |
| Zinc                               | 2300                   | 4600                     | 32 J                               | 38 J                               | 13 J                               | 47 J                               | 15 J                               |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I22<br>Feb-05<br>0-6" bls | SS-SF/SB-I24<br>Feb-05<br>0-6" bls | SS-SF/SB-J03<br>Feb-05<br>0-6" bls | SS-SF/SB-J07<br>Feb-05<br>0-6" bls | SS-SF/SB-J23<br>Feb-05<br>0-6" bls |
|------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Dioxins/Furans (ng/kg)</b>                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,6,7,8-HEXACHLORODIBENZOFURAN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,4,7,8-PENTACHLORODIBENZOFURAN                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZODIOXIN                     | 3.9                    | 4                        |                                    |                                    |                                    |                                    |                                    |
| 2,3,7,8-TETRACHLORODIBENZOFURAN                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzodioxin (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Hexachlorodibenzofuran (Total)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZOFURAN (TOTAL)                       |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZOFURAN                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZODIOXIN (TOTAL)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| PENTACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pentachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Avian Toxic. Equiv. Value, From WHO TEQ-98)     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Fish Toxic. Equiv. Value, From WHO TEQ-98)      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (Mammalian Toxic. Equiv. Value, From WHO TEQ-98) |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)             | 3.9                    |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzodioxin (Total)                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachlorodibenzofuran (Total)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRACHLORODIBENZOFURAN (TOTAL)                      |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                               | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I22<br>Feb-05<br>0-6" bls | SS-SF/SB-I24<br>Feb-05<br>0-6" bls | SS-SF/SB-J03<br>Feb-05<br>0-6" bls | SS-SF/SB-J07<br>Feb-05<br>0-6" bls | SS-SF/SB-J23<br>Feb-05<br>0-6" bls |
|-----------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Semivolatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| (Z) 14-TRICOSENYL FORMATE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| GAMMA.-SITOSTEROL                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 17-OCTADECENAL                                |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-HEPTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 2-PENTACOSANONE                               |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                               | 24000                  | 48000                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                  |                        | 98                       |                                    |                                    |                                    |                                    |                                    |
| Benzaldehyde                                  | 610000                 |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                            | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                | 62                     | 62                       |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                          | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                          |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                          | 6200                   | 6200                     |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                  | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                    | 35000                  | 35000                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                          | 1200000                | 2400000                  |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                      | 62000                  | 62000                    |                                    |                                    |                                    |                                    |                                    |
| D:C-FRIEDOOLEAN-8-EN-3-ONE                    |                        |                          |                                    |                                    |                                    |                                    |                                    |
| D-FRIEDOOLEAN-14-EN-3-ONE                     |                        |                          |                                    |                                    |                                    |                                    |                                    |
| EICOSANOL (2 isomers)                         |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                  | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                        | 620                    | 620                      |                                    |                                    |                                    |                                    |                                    |
| MIREX                                         | 270                    |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                             |                        |                          |                                    |                                    |                                    |                                    |                                    |
| OCTADECENAL                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                        | 230000                 | 460000                   |                                    |                                    |                                    |                                    |                                    |
| STIGMAST-4-EN-3-ONE                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANAL                                  |                        |                          |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                            |                        |                          |                                    |                                    |                                    |                                    |                                    |

Table 5-6  
Surface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I22<br>Feb-05<br>0-6" bls | SS-SF/SB-I24<br>Feb-05<br>0-6" bls | SS-SF/SB-J03<br>Feb-05<br>0-6" bls | SS-SF/SB-J07<br>Feb-05<br>0-6" bls | SS-SF/SB-J23<br>Feb-05<br>0-6" bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Pesticides/PCBs (ug/kg)</b>            |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                  | 1700                   | 1700                     |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Dieldrin                                  | 30                     | 30                       |                                    |                                    |                                    |                                    |                                    |
| Endosulfan I                              |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                        |                        |                          |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                           |                        |                          |                                    |                                    |                                    |                                    |                                    |
| Heptachlor                                | 110                    | 110                      |                                    |                                    |                                    |                                    |                                    |
| Heptachlor epoxide                        | 53                     | 53                       |                                    |                                    |                                    |                                    |                                    |
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 3400                   | 3400                     |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 2200000                | 4400000                  |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 1400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 640                    | 640                      |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 2200000                |                          |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 480                    | 480                      |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 27000                  | 54000                    |                                    |                                    |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>2-4' bls | SS-SF/SB-01<br>Oct-02<br>3-4' bls | SS-SF/SB-02<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>May-04<br>5-7' bls | SS-SF/SB-03<br>May-04<br>10-12' bls | SS-SF/SB-03<br>May-04<br>15-17' bls |
|-------------------------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| Aluminum                                  | 100000000              |                          | 53000                               | 8100                              | 9800                              | 14000                             | 40000                             | 48000                               | 51000                               |
| Antimony                                  | 41                     | 6.2                      | 8 UR                                | 1 UJ                              | 1 UJ                              | 2.2 UJ                            | 6.1 UR                            | 6.1 UR                              | 5.8 UR                              |
| Arsenic                                   | 1.6                    | 4.4                      | 2 J                                 | 1.2 U                             | 1.6                               | 1.9 R                             | 1 UR                              | 1 UR                                | 0.96 UR                             |
| Barium                                    | 6700                   |                          | 19 J                                | 10                                | 10                                | 84                                | 83 J                              | 110 J                               | 100 J                               |
| Beryllium                                 | 190                    | 30                       | 0.36 J                              | 0.4                               | 0.39                              | 1.1                               | 1.6                               | 1.9                                 | 2.1                                 |
| Cadmium                                   | 45                     | 7.4                      | 0.67 U                              | 0.17 U                            | 0.18 U                            | 0.9                               | 1                                 | 0.66                                | 0.72                                |
| Calcium                                   |                        |                          | 28 UJ                               | 150                               | 78                                | 630                               | 210 J                             | 150 J                               | 440 J                               |
| Chromium                                  | 64                     | 30                       | 25 J                                | 6.3                               | 9.9                               | 51                                | 43 J                              | 9.2 J                               | 26 J                                |
| Cobalt                                    | 1900                   |                          | 6.7 U                               | 1.7 U                             | 1.8 U                             | 4.5                               | 13 J                              | 21 J                                | 22 J                                |
| Copper                                    | 4100                   | 620                      | 7.5 J                               | 9.5 J                             | 3.5 J                             | 50 J                              | 26                                | 2.1 J                               | 43                                  |
| Iron                                      | 100000                 |                          | 44000                               | 19000                             | 24000                             | 22000                             | 30000 J                           | 18000 J                             | 19000 J                             |
| Lead                                      | 750                    | 400                      | 18 J                                | 12                                | 12                                | 15                                | 11                                | 5.2                                 | 3.3                                 |
| Magnesium                                 |                        |                          | 520 J                               | 280                               | 170                               | 880                               | 5300 J                            | 6500 J                              | 7900 J                              |
| Manganese                                 | 1900                   | 360                      | 71                                  | 96                                | 82                                | 120                               | 250 J                             | 790 J                               | 430 J                               |
| Mercury                                   | 6.2                    | 4.6                      | 0.08 UJ                             | 0.06 U                            | 0.08 U                            | 0.12 U                            | 0.04 UJ                           | 0.04 UJ                             | 0.12 U                              |
| Nickel                                    | 2000                   | 320                      | 5.3 UJ                              | 2                                 | 1.4 U                             | 21                                | 13 J                              | 7.8 J                               | 12 J                                |
| Potassium                                 |                        |                          | 550 J                               | 210                               | 250                               | 700                               | 4400 J                            | 5500 J                              | 6800 J                              |
| Selenium                                  | 510                    | 78                       | 2.6 UJ                              | 1.1 U                             | 1.1 U                             | 1.4 U                             | 0.99 UJ                           | 4.2 J                               | 3.3 UJ                              |
| Silver                                    | 510                    | 78                       | 1.3 U                               | 0.35                              | 0.36                              | 0.44                              | 0.26 J                            | 1 UJ                                | 0.81 UJ                             |
| Sodium                                    |                        |                          | 27 UJ                               | 120                               | 120                               | 180                               | 26 J                              | 49 J                                | 64 J                                |
| Thallium                                  | 6.7                    | 1.04                     | 3.3 U                               | 1.5 U                             | 1.6 U                             | 2.1 U                             | 2.5 UR                            | 2.5 UR                              | 2.4 UR                              |
| Vanadium                                  | 100                    | 15.6                     | 100                                 | 56                                | 66                                | 48                                | 80                                | 41                                  | 57                                  |
| Zinc                                      | 100000                 | 4600                     | 11 J                                | 14 J                              | 7.1 J                             | 1800 J                            | 43 J                              | 37 J                                | 38 J                                |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                     | 6.4                               |                                   |                                   |                                   |                                     |                                     |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                     | 0.071 U                           |                                   |                                   |                                   |                                     |                                     |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                     | 10 J                              |                                   |                                   |                                   |                                     |                                     |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                     | 0.054 UJ                          |                                   |                                   |                                   |                                     |                                     |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                     | 0.071 UJ                          |                                   |                                   |                                   |                                     |                                     |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                     | 1300                              |                                   |                                   |                                   |                                     |                                     |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                     | 1.4                               |                                   |                                   |                                   |                                     |                                     |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>2-4' bls | SS-SF/SB-01<br>Oct-02<br>3-4' bls | SS-SF/SB-02<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>May-04<br>5-7' bls | SS-SF/SB-03<br>May-04<br>10-12' bls | SS-SF/SB-03<br>May-04<br>15-17' bls |
|-----------------------------------------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| 1,1'-Biphenyl                                             | 2300000                |                          | 440 U                               | 420 U                             | 420 U                             | 230 J                             | 380 U                             | 380 U                               | 370 U                               |
| 2-Methylnaphthalene                                       |                        | 11200                    | 440 U                               | 420 U                             | 420 U                             | 140 J                             | 380 U                             | 380 U                               | 370 U                               |
| 3+4-METHYLPHENOLS                                         |                        |                          | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 440 U                               | 420 U                             | 420 U                             | 340 J                             | 380 U                             | 380 U                               | 370 U                               |
| Acetophenone                                              |                        | 98                       | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 440 U                               | 420 U                             | 420 U                             | 73 J                              | 380 U                             | 380 U                               | 370 U                               |
| Benzo(a)pyrene                                            | 210                    | 62                       | 440 U                               | 420 U                             | 420 U                             | 77 J                              | 380 U                             | 380 U                               | 370 U                               |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 440 U                               | 420 U                             | 420 U                             | 70 J                              | 380 U                             | 380 U                               | 370 U                               |
| Benzo(g,h,i)perylene                                      |                        |                          | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 440 U                               | 420 U                             | 420 U                             | 93 J                              | 380 U                             | 380 U                               | 370 U                               |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 440 U                               | 420 U                             | 420 U                             | 33000                             | 380 U                             | 380 U                               | 370 U                               |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          | 91 NJ                               |                                   |                                   |                                   |                                   |                                     |                                     |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 440 U                               | 420 U                             | 420 U                             | 610                               | 380 U                             | 380 U                               | 370 U                               |
| Carbazole                                                 | 86000                  |                          | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| CHOLESTEROL                                               |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| Chrysene                                                  | 210000                 | 62000                    | 440 U                               | 420 U                             | 420 U                             | 120 J                             | 380 U                             | 380 U                               | 370 U                               |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 440 U                               | 420 U                             | 420 U                             | 84 J                              | 380 U                             | 380 U                               | 370 U                               |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 440 U                               | 420 U                             | 910 J                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          | 120 NJ                              |                                   |                                   |                                   |                                   |                                     |                                     |
| Fluoranthene                                              | 2200000                | 460000                   | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| Fluorene                                                  | 2600000                | 540000                   | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| HEXADECANOIC ACID                                         |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 440 U                               | 420 U                             | 420 U                             | 71 J                              | 380 U                             | 380 U                               | 370 U                               |
| Naphthalene                                               | 19000                  | 11200                    | 440 U                               | 420 U                             | 420 U                             | 270 J                             | 380 U                             | 380 U                               | 370 U                               |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          | 260 NJ                              |                                   |                                   |                                   |                                   |                                     |                                     |
| OCTABENZONE                                               |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| OCTADECANOIC ACID                                         |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| Phenanthrene                                              |                        |                          | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| Phenol                                                    | 100000000              | 3600000                  | 440 U                               | 420 U                             | 420 U                             | 610 U                             | 380 U                             | 380 U                               | 370 U                               |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| Pyrene                                                    | 2900000                | 460000                   | 440 U                               | 420 U                             | 420 U                             | 69 J                              | 380 U                             | 380 U                               | 370 U                               |
| TETRADECANOIC ACID                                        |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 4.4 U                               | 4.2 U                             | 4.2 U                             | 6 J                               | 3.8 U                             | 3.8 U                               | 3.7 U                               |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 4.4 U                               | 4.2 U                             | 4.2 U                             | 6.1 U                             | 3.8 U                             | 3.8 U                               | 3.7 U                               |
| alpha-BHC                                                 | 360                    | 92                       | 2.3 U                               | 2.2 U                             | 2.2 U                             | 3.1 U                             | 2 U                               | 2 U                                 | 1.9 U                               |
| alpha-Chlordane                                           |                        |                          | 2.3 U                               | 2.2 U                             | 2.2 U                             | 3.1 U                             | 2 U                               | 2 U                                 | 1.9 U                               |
| beta-BHC                                                  | 1300                   | 320                      | 2.3 U                               | 2.2 U                             | 2.2 U                             | 3.1 N                             | 2 U                               | 2 U                                 | 1.9 U                               |
| Endosulfan sulfate                                        |                        |                          | 4.4 U                               | 4.2 U                             | 4.2 U                             | 6.1 U                             | 3.8 U                             | 3.8 U                               | 3.7 U                               |
| gamma-Chlordane                                           |                        |                          | 2.3 U                               | 2.2 U                             | 2.2 U                             | 3.1 U                             | 2 U                               | 2 U                                 | 1.9 U                               |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>2-4' bls | SS-SF/SB-01<br>Oct-02<br>3-4' bls | SS-SF/SB-02<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>May-04<br>5-7' bls | SS-SF/SB-03<br>May-04<br>10-12' bls | SS-SF/SB-03<br>May-04<br>15-17' bls |
|--------------------|------------------------|--------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2.3 U                               | 2.2 U                             | 2.2 U                             | 2.1 JN                            | 2 U                               | 2 U                                 | 1.9 U                               |

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Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-01BG<br>Feb-05<br>2-4' bls | SS-SF/SB-01<br>Oct-02<br>3-4' bls | SS-SF/SB-02<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>Oct-02<br>3-4' bls | SS-SF/SB-03<br>May-04<br>5-7' bls | SS-SF/SB-03<br>May-04<br>10-12' bls | SS-SF/SB-03<br>May-04<br>15-17' bls |
|-------------------------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 14 U                                | 12 U                              | 12 U                              | 120 J                             | 12 U                              | 12 U                                | 10 U                                |
| 1-HEXACOSANOL                             |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| 2-Butanone                                | 11000000               | 4400000                  | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| 2-Hexanone                                |                        |                          | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Acetone                                   | 5400000                | 2800000                  | 32 U                                | 54 U                              | 12 U                              | 86 J                              | 12 U                              | 12 U                                | 10 U                                |
| Benzene                                   | 1400                   | 640                      | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| CAMPHOR                                   |                        |                          |                                     | 21 NJ                             |                                   |                                   |                                   |                                     |                                     |
| Carbon Disulfide                          | 720000                 | 72000                    | 14 U                                | 12 U                              | 12 U                              | 22 J                              | 12 U                              | 12 U                                | 10 U                                |
| Chlorobenzene                             | 53000                  | 30000                    | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Cyclohexane                               | 140000                 |                          | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Ethylbenzene                              | 400000                 | 380000                   | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Isopropylbenzene                          | 200000                 | 114000                   | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Methyl Acetate                            | 9200000                |                          | 14 U                                | 12 UJ                             | 12 UJ                             | 27 J                              | 12 U                              | 12 U                                | 10 U                                |
| Methylcyclohexane                         | 870000                 |                          | 14 U                                | 12 U                              | 12 U                              | 28 J                              | 12 U                              | 12 U                                | 10 U                                |
| Tetrachloroethene                         | 1300                   | 480                      | 5 J                                 | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                     |                                   |                                   |                                   |                                   |                                     |                                     |
| Toluene                                   | 520000                 | 132000                   | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Trichloroethene                           | 110                    | 53                       | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 14 U                                | 12 U                              | 12 U                              | 24 UJ                             | 12 U                              | 12 U                                | 10 U                                |
| Xylenes (total)                           | 420000                 | 54000                    | 14 U                                | 12 U                              | 12 U                              | 22 J                              | 12 U                              | 12 U                                | 10 U                                |

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Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>3-4' bls | SS-SF/SB-04<br>May-04<br>5-7' bls | SS-SF/SB-04<br>May-04<br>10-12' bls | SS-SF/SB-06<br>Oct-02<br>15-17' bls | SS-SF/SB-06<br>Oct-02<br>5-7' bls | SS-SF/SB-06<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>Oct-02<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Aluminum                                  | 100000000              |                          | 16000                             | 20000 J                           | 14000 J                             | 22000                               | 11000                             | 3400                                | 24000                             |
| Antimony                                  | 41                     | 6.2                      | 0.95 UJ                           | 5.7 UR                            | 6.1 UR                              | 2.3 UJ                              | 9.9 UJ                            | 2 UJ                                | 1.6 R                             |
| Arsenic                                   | 1.6                    | 4.4                      | 1.3 R                             | 0.95 U                            | 1 U                                 | 1.4 U                               | 3.8                               | 1.9 U                               | 1.9                               |
| Barium                                    | 6700                   |                          | 23                                | 47 J                              | 32 J                                | 270                                 | 860                               | 210                                 | 49                                |
| Beryllium                                 | 190                    | 30                       | 0.73                              | 0.95                              | 0.68                                | 1.5                                 | 0.65                              | 0.35 U                              | 0.46 U                            |
| Cadmium                                   | 45                     | 7.4                      | 0.17 U                            | 0.47 J                            | 0.36 J                              | 2.6                                 | 6.1                               | 0.8                                 | 0.22 R                            |
| Calcium                                   |                        |                          | 110                               | 34 J                              | 27 J                                | 2700                                | 14000                             | 2300                                | 150                               |
| Chromium                                  | 64                     | 30                       | 11                                | 6.9 J                             | 6.9 J                               | 45                                  | 76                                | 210                                 | 14                                |
| Cobalt                                    | 1900                   |                          | 1.6 U                             | 6.5                               | 4.9 UJ                              | 12                                  | 4                                 | 2.7 U                               | 6.2                               |
| Copper                                    | 4100                   | 620                      | 1.4 UJ                            | 2.4                               | 2.7                                 | 260 J                               | 600 J                             | 66                                  | 10 J                              |
| Iron                                      | 100000                 |                          | 22000                             | 19000 J                           | 16000 J                             | 19000                               | 15000                             | 5700 J                              | 29000                             |
| Lead                                      | 750                    | 400                      | 7.6                               | 8.9 J                             | 6.9 J                               | 110                                 | 280                               | 130                                 | 10                                |
| Magnesium                                 |                        |                          | 1000                              | 4200                              | 2500                                | 4000                                | 2400                              | 830                                 | 2500                              |
| Manganese                                 | 1900                   | 360                      | 67                                | 200 J                             | 190 J                               | 260                                 | 160                               | 88                                  | 140                               |
| Mercury                                   | 6.2                    | 4.6                      | 0.06 U                            | 0.12 U                            | 0.03 UJ                             | 0.35                                | 1.6                               | 0.21                                | 0.06 U                            |
| Nickel                                    | 2000                   | 320                      | 2.8                               | 4.4 J                             | 3 UJ                                | 540                                 | 450                               | 11                                  | 5.2                               |
| Potassium                                 |                        |                          | 1000                              | 4300                              | 2400                                | 3300                                | 4500                              | 5000                                | 1900                              |
| Selenium                                  | 510                    | 78                       | 1.3                               | 1.4 UJ                            | 1.5 UJ                              | 1.6                                 | 5.5                               | 1.7 U                               | 0.87 UJ                           |
| Silver                                    | 510                    | 78                       | 0.32 R                            | 0.46 UJ                           | 0.21 UJ                             | 1                                   | 2.5                               | 0.5 U                               | 0.23 U                            |
| Sodium                                    |                        |                          | 110 U                             | 45 J                              | 57 UJ                               | 170                                 | 900                               | 680                                 | 920                               |
| Thallium                                  | 6.7                    | 1.04                     | 1.4 U                             | 2.4 U                             | 2.5 U                               | 1.7 U                               | 3 U                               | 2.3 U                               | 2.7                               |
| Vanadium                                  | 100                    | 15.6                     | 52                                | 41 J                              | 36 J                                | 49                                  | 38                                | 13                                  | 73                                |
| Zinc                                      | 100000                 | 4600                     | 8.9 J                             | 19 J                              | 13 J                                | 810 J                               | 2100 J                            | 760 J                               | 20 J                              |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          | 2.7 J                             |                                   |                                     |                                     |                                   |                                     |                                   |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          | 0.2 J                             |                                   |                                     |                                     |                                   |                                     |                                   |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          | 5.1 J                             |                                   |                                     |                                     |                                   |                                     |                                   |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          | 0.26 J                            |                                   |                                     |                                     |                                   |                                     |                                   |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          | 0.69 J                            |                                   |                                     |                                     |                                   |                                     |                                   |
| OCTACHLORODIBENZODIOXIN                   |                        |                          | 310                               |                                   |                                     |                                     |                                   |                                     |                                   |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          | 0.36 J                            |                                   |                                     |                                     |                                   |                                     |                                   |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                                      | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>3-4' bls | SS-SF/SB-04<br>May-04<br>5-7' bls | SS-SF/SB-04<br>May-04<br>10-12' bls | SS-SF/SB-06<br>Oct-02<br>15-17' bls | SS-SF/SB-06<br>Oct-02<br>5-7' bls | SS-SF/SB-06<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>Oct-02<br>2-4' bls |
|----------------------------------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>                         |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| 1,1'-Biphenyl                                                        | 2300000                |                          | 400 U                             | 400 U                             | 400 U                               | 250 J                               | 50000 U                           | 2100 J                              | 420 U                             |
| 2-Methylnaphthalene                                                  |                        | 11200                    | 400 U                             | 400 U                             | 400 U                               | 1000                                | 50000 U                           | 5400                                | 420 U                             |
| 3+4-METHYLPHENOLS                                                    |                        |                          | 400 U                             | 400 U                             | 400 U                               | 73 J                                | 120000                            | 170000                              | 420 U                             |
| 4-Chloroaniline                                                      | 250000                 | 48000                    | 400 U                             | 400 U                             | 400 U                               | 2500                                | 14000 J                           | 2200 U                              | 420 U                             |
| Acetophenone                                                         |                        | 98                       | 400 U                             | 400 U                             | 400 U                               | 970                                 | 50000 U                           | 2200 U                              | 420 U                             |
| Benzo(a)anthracene                                                   | 2100                   | 620                      | 400 U                             | 400 U                             | 400 U                               | 120 J                               | 50000 U                           | 370 J                               | 420 U                             |
| Benzo(a)pyrene                                                       | 210                    | 62                       | 400 U                             | 400 U                             | 400 U                               | 140 J                               | 50000 U                           | 370 J                               | 420 U                             |
| Benzo(b)fluoranthene                                                 | 2100                   | 620                      | 400 U                             | 400 U                             | 400 U                               | 220 J                               | 50000 U                           | 770 J                               | 420 U                             |
| Benzo(g,h,i)perylene                                                 |                        |                          | 400 U                             | 400 U                             | 400 U                               | 110 J                               | 50000 U                           | 2200 U                              | 420 U                             |
| Benzo(k)fluoranthene                                                 | 21000                  | 6200                     | 400 U                             | 400 U                             | 400 U                               | 160 J                               | 50000 U                           | 670 J                               | 420 U                             |
| BENZOIC ACID                                                         | 100000000              | 48000000                 |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| bis(2-Ethylhexyl)phthalate                                           | 120000                 | 35000                    | 400 U                             | 400 U                             | 400 U                               | 1200                                | 50000 U                           | 30000                               | 570                               |
| BUTANOIC ACID, BUTYL ESTER                                           |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Butylbenzylphthalate                                                 | 100000000              | 2400000                  | 400 U                             | 400 U                             | 400 U                               | 470 U                               | 50000 U                           | 2200 U                              | 420 U                             |
| Carbazole                                                            | 86000                  |                          | 400 U                             | 400 U                             | 400 U                               | 470 U                               | 50000 U                           | 220 J                               | 420 U                             |
| CHOLESTEROL                                                          |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Chrysene                                                             | 210000                 | 62000                    | 400 U                             | 400 U                             | 400 U                               | 190 J                               | 50000 U                           | 540 J                               | 420 U                             |
| Dibenz(a,h)anthracene                                                | 210                    | 62                       | 400 U                             | 400 U                             | 400 U                               | 57 J                                | 50000 U                           | 2200 U                              | 420 U                             |
| Di-n-octylphthalate                                                  | 25000000               | 480000                   | 460 J                             | 400 U                             | 400 U                               | 470 U                               | 50000 U                           | 2200 U                              | 420 U                             |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                                         |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                                         |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Fluoranthene                                                         | 2200000                | 460000                   | 400 U                             | 400 U                             | 400 U                               | 240 J                               | 50000 U                           | 940 J                               | 420 U                             |
| Fluorene                                                             | 2600000                | 540000                   | 400 U                             | 400 U                             | 400 U                               | 110 J                               | 50000 U                           | 2200 U                              | 420 U                             |
| HEXADECANOIC ACID                                                    |                        |                          |                                   |                                   |                                     | 4000 NJ                             |                                   | 85000 NJ                            |                                   |
| Indeno(1,2,3-cd)pyrene                                               | 2100                   | 620                      | 400 U                             | 400 U                             | 400 U                               | 110 J                               | 50000 U                           | 220 U                               | 420 U                             |
| Naphthalene                                                          | 19000                  | 11200                    | 400 U                             | 400 U                             | 400 U                               | 2500                                | 8000 J                            | 11000                               | 420 U                             |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2-OCTABENZONE |                        |                          |                                   |                                   |                                     | 510 NJ                              |                                   |                                     |                                   |
| OCTADECANOIC ACID                                                    |                        |                          | 350 NJ                            |                                   |                                     |                                     | 510000 NJ                         | 54000 NJ                            |                                   |
| Phenanthrene                                                         |                        |                          | 400 U                             | 400 U                             | 400 U                               | 250 J                               | 50000 U                           | 1600 J                              | 420 U                             |
| Phenol                                                               | 100000000              | 3600000                  | 400 U                             | 400 U                             | 400 U                               | 470 U                               | 50000 U                           | 4300                                | 420 U                             |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                               |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL            |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Pyrene                                                               | 2900000                | 460000                   | 400 U                             | 400 U                             | 400 U                               | 240 J                               | 50000 U                           | 1100 J                              | 420 U                             |
| TETRADECANOIC ACID                                                   |                        |                          |                                   |                                   |                                     |                                     |                                   | 16000 NJ                            |                                   |
| <b>Pesticides/PCBs (ug/kg)</b>                                       |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| 4,4'-DDE                                                             | 7000                   | 1700                     | 4 U                               | 4 U                               | 4 U                                 | 7.3                                 | 16                                | 9.3 U                               | 4.2 U                             |
| 4,4'-DDT                                                             | 7000                   | 1700                     | 4 U                               | 4 U                               | 4 U                                 | 4.7 U                               | 12                                | 9.8                                 | 4.2 U                             |
| alpha-BHC                                                            | 360                    | 92                       | 2 U                               | 2.1 U                             | 2.1 U                               | 0.95 JN                             | 4.1 U                             | 3.8 U                               | 2.2 U                             |
| alpha-Chlordane                                                      |                        |                          | 2 U                               | 2.1 U                             | 2.1 U                               | 10 U                                | 4.1 U                             | 3.8 U                               | 2.2 U                             |
| beta-BHC                                                             | 1300                   | 320                      | 2 U                               | 2.1 U                             | 2.1 U                               | 2.4 U                               | 4.1 U                             | 3.8 U                               | 2.2 U                             |
| Endosulfan sulfate                                                   |                        |                          | 4 U                               | 4 U                               | 4 U                                 | 4.7 U                               | 8 U                               | 7.3 U                               | 4.2 U                             |
| gamma-Chlordane                                                      |                        |                          | 2 U                               | 2.1 U                             | 2.1 U                               | 6.7                                 | 4.1 U                             | 4.1 U                               | 2.2 U                             |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>3-4' bls | SS-SF/SB-04<br>May-04<br>5-7' bls | SS-SF/SB-04<br>May-04<br>10-12' bls | SS-SF/SB-06<br>Oct-02<br>15-17' bls | SS-SF/SB-06<br>Oct-02<br>5-7' bls | SS-SF/SB-06<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>Oct-02<br>2-4' bls |
|--------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2 U                               | 2.1 U                             | 2.1 U                               | 2.4 U                               | 4.1 U                             | 8.1 U                               | 2.2 U                             |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-04<br>Oct-02<br>3-4' bls | SS-SF/SB-04<br>May-04<br>5-7' bls | SS-SF/SB-04<br>May-04<br>10-12' bls | SS-SF/SB-06<br>Oct-02<br>15-17' bls | SS-SF/SB-06<br>Oct-02<br>5-7' bls | SS-SF/SB-06<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>Oct-02<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 6100                              | 410 J                               | 11 U                              |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 10 UJ                             | 11 U                              | 11 U                                | 15 UJ                               | 5500 U                            | 2800 U                              | 11 U                              |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                   |                                   |                                     |                                     | 37000 NJ                          | 2000 NJ                             |                                   |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 10 U                              | 11 U                              | 11 U                                | 28                                  | 25000                             | 2800 U                              | 11 U                              |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 10 U                              | 11 U                              | 11 U                                | 130                                 | 15000                             | 2800 U                              | 11 U                              |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 10 U                              | 11 U                              | 11 U                                | 98                                  | 53000                             | 3700                                | 11 U                              |
| 1-HEXACOSANOL                             |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| 2-Butanone                                | 11000000               | 4400000                  | 10 U                              | 11 UJ                             | 11 UJ                               | 35                                  | 11000                             | 2800 U                              | 11 U                              |
| 2-Hexanone                                |                        |                          | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 5500 U                            | 2800 U                              | 11 U                              |
| Acetone                                   | 5400000                | 2800000                  | 13 U                              | 11 U                              | 11 U                                | 1100 J                              | 9200 U                            | 3100 U                              | 11 U                              |
| Benzene                                   | 1400                   | 640                      | 10 U                              | 11 U                              | 11 U                                | 270                                 | 5500 U                            | 400 J                               | 11 U                              |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| CAMPHOR                                   |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Carbon Disulfide                          | 720000                 | 72000                    | 10 U                              | 11 U                              | 11 U                                | 8 J                                 | 700 J                             | 2800 U                              | 11 U                              |
| Chlorobenzene                             | 53000                  | 30000                    | 10 U                              | 11 U                              | 11 U                                | 550                                 | 5500 U                            | 2800 U                              | 11 U                              |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 24000                             | 2800 U                              | 11 U                              |
| Cyclohexane                               | 140000                 |                          | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 750 J                             | 2700 J                              | 11 U                              |
| Ethylbenzene                              | 400000                 | 380000                   | 10 U                              | 11 U                              | 11 U                                | 110                                 | 14000                             | 30000                               | 11 U                              |
| Isopropylbenzene                          | 200000                 | 114000                   | 10 U                              | 11 U                              | 11 U                                | 4 J                                 | 950 J                             | 770 J                               | 11 U                              |
| Methyl Acetate                            | 9200000                |                          | 10 U                              | 11 U                              | 11 U                                | 14 J                                | 3700 J                            | 11000                               | 11 U                              |
| Methylcyclohexane                         | 870000                 |                          | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 5500 J                            | 40000                               | 11 U                              |
| Tetrachloroethene                         | 1300                   | 480                      | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 6200                              | 3800 U                              | 11 U                              |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                   |                                   |                                     |                                     |                                   |                                     |                                   |
| Toluene                                   | 520000                 | 132000                   | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 320000                            | 370000                              | 11 U                              |
| Trichloroethene                           | 110                    | 53                       | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 38000                             | 280 J                               | 11 U                              |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 10 U                              | 11 U                              | 11 U                                | 15 U                                | 5500 U                            | 2800 U                              | 11 U                              |
| Xylenes (total)                           | 420000                 | 54000                    | 10 U                              | 11 U                              | 11 U                                | 400                                 | 52000                             | 140000                              | 11 U                              |

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Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-07<br>Oct-02<br>2-4' bls | SS-SF/SB-07<br>Oct-02<br>5-7' bls | SS-SF/SB-07<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>May-04<br>15-17' bls | SS-SF/SB-07<br>May-04<br>20-22' bls | SS-SF/SB-07<br>May-04<br>25-27' bls | SS-SF/SB-08<br>Oct-02<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Aluminum                                  | 10000000               |                          | 21000                             | 27000                             | 21000                               | 22000 J                             | 22000 J                             | 27000 J                             | 38000                             |
| Antimony                                  | 41                     | 6.2                      | 2.1 J                             | 1 J                               | 0.91 UJ                             | 6 UR                                | 5.2 UR                              | 5.6 UR                              | 0.93 UJ                           |
| Arsenic                                   | 1.6                    | 4.4                      | 1.3                               | 0.84 U                            | 1.5 R                               | 1 U                                 | 0.86 U                              | 0.94 U                              | 0.86 U                            |
| Barium                                    | 6700                   |                          | 220                               | 86                                | 64                                  | 84 J                                | 150 J                               | 250 J                               | 53                                |
| Beryllium                                 | 190                    | 30                       | 0.54 U                            | 0.41 U                            | 0.34 U                              | 1.8                                 | 1.5                                 | 2.3                                 | 0.54 U                            |
| Cadmium                                   | 45                     | 7.4                      | 0.32 R                            | 0.16                              | 0.14 U                              | 0.41 J                              | 0.41 J                              | 0.7                                 | 0.14 U                            |
| Calcium                                   |                        |                          | 160                               | 120                               | 95                                  | 280 J                               | 190 J                               | 370 J                               | 560                               |
| Chromium                                  | 64                     | 30                       | 20                                | 8                                 | 14                                  | 8.6 J                               | 5.5 J                               | 130 J                               | 66                                |
| Cobalt                                    | 1900                   |                          | 12                                | 18                                | 8.6                                 | 7.5                                 | 8.4                                 | 15                                  | 15                                |
| Copper                                    | 4100                   | 620                      | 10 J                              | 4.4 UJ                            | 14 J                                | 1.1 J                               | 4                                   | 2 J                                 | 51 J                              |
| Iron                                      | 100000                 |                          | 20000                             | 22000                             | 17000                               | 14000 J                             | 15000 J                             | 28000 J                             | 18000                             |
| Lead                                      | 750                    | 400                      | 10                                | 9.9                               | 6.8                                 | 3.6 J                               | 5.2 J                               | 5.4 J                               | 4.5                               |
| Magnesium                                 |                        |                          | 3800                              | 5900                              | 3500                                | 6900                                | 5500                                | 12000                               | 9600                              |
| Manganese                                 | 1900                   | 360                      | 190                               | 400                               | 150                                 | 350 J                               | 430 J                               | 660 J                               | 260                               |
| Mercury                                   | 6.2                    | 4.6                      | 0.06 U                            | 0.06 U                            | 0.06 U                              | 0.12 U                              | 0.1 U                               | 0.02 UJ                             | 0.06 U                            |
| Nickel                                    | 2000                   | 320                      | 8.2                               | 6.9                               | 5                                   | 5.5 J                               | 4.5 J                               | 36 J                                | 42                                |
| Potassium                                 |                        |                          | 3400                              | 4700                              | 2700                                | 5400                                | 5100                                | 11000                               | 5800                              |
| Selenium                                  | 510                    | 78                       | 0.83 UJ                           | 0.77 UJ                           | 0.77 UJ                             | 2.6 UJ                              | 2.6 UJ                              | 2.8 UJ                              | 0.79 UR                           |
| Silver                                    | 510                    | 78                       | 0.22 U                            | 0.2 U                             | 0.2 U                               | 0.93 UJ                             | 0.94                                | 0.94 U                              | 0.21 U                            |
| Sodium                                    |                        |                          | 860                               | 770                               | 600                                 | 58 J                                | 54 J                                | 92 J                                | 730                               |
| Thallium                                  | 6.7                    | 1.04                     | 1.5 U                             | 1.18                              | 1.4 U                               | 2.5 U                               | 2.2 U                               | 2.3 U                               | 1.4 U                             |
| Vanadium                                  | 100                    | 15.6                     | 248                               | 243                               | 242                                 | 241 J                               | 30 J                                | 264 J                               | 50                                |
| Zinc                                      | 100000                 | 4600                     | 240 J                             | 28 J                              | 16 J                                | 21 J                                | 21 J                                | 42 J                                | 55 J                              |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-07<br>Oct-02<br>2-4' bls | SS-SF/SB-07<br>Oct-02<br>5-7' bls | SS-SF/SB-07<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>May-04<br>15-17' bls | SS-SF/SB-07<br>May-04<br>20-22' bls | SS-SF/SB-07<br>May-04<br>25-27' bls | SS-SF/SB-08<br>Oct-02<br>2-4' bls |
|-----------------------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 1,1'-Biphenyl                                             | 2300000                |                          | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| 2-Methylnaphthalene                                       |                        | 11200                    | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| 3+4-METHYLPHENOLS                                         |                        |                          | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Acetophenone                                              |                        | 98                       | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Benzo(a)pyrene                                            | 210                    | 62                       | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Benzo(g,h,i)perylene                                      |                        |                          | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 1100                              | 380 U                             | 380 U                               | 540 J                               | 470 J                               | 370 U                               | 380 U                             |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Carbazole                                                 | 86000                  |                          | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| CHOLESTEROL                                               |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Chrysene                                                  | 210000                 | 62000                    | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Fluoranthene                                              | 2200000                | 460000                   | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Fluorene                                                  | 2600000                | 540000                   | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| HEXADECANOIC ACID                                         |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Naphthalene                                               | 19000                  | 11200                    | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| OCTABENZONE                                               |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| OCTADECANOIC ACID                                         |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Phenanthrene                                              |                        |                          | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| Phenol                                                    | 100000000              | 3600000                  | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Pyrene                                                    | 2900000                | 460000                   | 410 U                             | 380 U                             | 380 U                               | 350 U                               | 370 U                               | 370 U                               | 380 U                             |
| TETRADECANOIC ACID                                        |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 4.7 U                             | 3.8 U                             | 3.8 U                               | 3.5 U                               | 3.7 U                               | 3.7 U                               | 3.8 U                             |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 24 N                              | 3.8 U                             | 3.8 U                               | 3.5 U                               | 3.7 U                               | 8.5                                 | 3.8 U                             |
| alpha-BHC                                                 | 360                    | 92                       | 2.1 U                             | 2 U                               | 1.9 U                               | 1.8 U                               | 1.9 U                               | 1.9 U                               | 2 U                               |
| alpha-Chlordane                                           |                        |                          | 2.1 U                             | 2 U                               | 1.9 U                               | 1.8 U                               | 1.9 U                               | 1.9 U                               | 2 U                               |
| beta-BHC                                                  | 1300                   | 320                      | 2.1 U                             | 2 U                               | 1.9 U                               | 1.8 U                               | 1.9 U                               | 1.9 U                               | 2 U                               |
| Endosulfan sulfate                                        |                        |                          | 7.1 N                             | 3.8 U                             | 3.8 U                               | 3.5 U                               | 3.7 U                               | 3.7 U                               | 3.8 U                             |
| gamma-Chlordane                                           |                        |                          | 2.1 U                             | 2 U                               | 1.9 U                               | 1.8 U                               | 1.9 U                               | 1.9 U                               | 2 U                               |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-07<br>Oct-02<br>2-4' bls | SS-SF/SB-07<br>Oct-02<br>5-7' bls | SS-SF/SB-07<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>May-04<br>15-17' bls | SS-SF/SB-07<br>May-04<br>20-22' bls | SS-SF/SB-07<br>May-04<br>25-27' bls | SS-SF/SB-08<br>Oct-02<br>2-4' bls |
|--------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2.1 U                             | 2 U                               | 1.9 U                               | 1.8 U                               | 1.9 U                               | 1.9 U                               | 2 U                               |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-07<br>Oct-02<br>2-4' bls | SS-SF/SB-07<br>Oct-02<br>5-7' bls | SS-SF/SB-07<br>Oct-02<br>10-12' bls | SS-SF/SB-07<br>May-04<br>15-17' bls | SS-SF/SB-07<br>May-04<br>20-22' bls | SS-SF/SB-07<br>May-04<br>25-27' bls | SS-SF/SB-08<br>Oct-02<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| 1-HEXACOSANOL                             |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| 2-Butanone                                | 11000000               | 4400000                  | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| 2-Hexanone                                |                        |                          | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 4 J                                 | 10 U                              |
| Acetone                                   | 5400000                | 2800000                  | 10 U                              | 16 U                              | 26 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Benzene                                   | 1400                   | 640                      | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| CAMPHOR                                   |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Carbon Disulfide                          | 720000                 | 72000                    | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Chlorobenzene                             | 53000                  | 30000                    | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Cyclohexane                               | 140000                 |                          | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Ethylbenzene                              | 400000                 | 380000                   | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 2 J                                 | 10 U                              |
| Isopropylbenzene                          | 200000                 | 114000                   | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Methyl Acetate                            | 9200000                |                          | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Methylcyclohexane                         | 870000                 |                          | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 5 J                                 | 10 U                              |
| Tetrachloroethene                         | 1300                   | 480                      | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                   |                                   |                                     |                                     |                                     |                                     |                                   |
| Toluene                                   | 520000                 | 132000                   | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Trichloroethene                           | 110                    | 53                       | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 11 U                                | 10 U                              |
| Xylenes (total)                           | 420000                 | 54000                    | 10 U                              | 11 U                              | 10 U                                | 10 U                                | 11 U                                | 9 J                                 | 10 U                              |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-08<br>Oct-02<br>5-7' bls | SS-SF/SB-08<br>Oct-02<br>10-12' bls | SS-SF/SB-08<br>May-04<br>15-17' bls | SS-SF/SB-08<br>May-04<br>20-22' bls | SS-SF/SB-08<br>May-04<br>25-27' bls | SS-SF/SB-09<br>Oct-02<br>2-4' bls | SS-SF/SB-09<br>Oct-02<br>5-7' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Aluminum                                  | 100000000              |                          | 22000                             | 42000                               | 26000 J                             | 17000 J                             | 16000 J                             | 33000                             | 28000                             |
| Antimony                                  | 41                     | 6.2                      | 1.3 J                             | 1.4 J                               | 5.6 UR                              | 5.3 UR                              | 5.6 UR                              | 1.6 R                             | 0.87 UJ                           |
| Arsenic                                   | 1.6                    | 4.4                      | 1.1 U                             | 0.91 U                              | 0.93 U                              | 0.88 U                              | 0.93 U                              | 1.9 R                             | 1.4                               |
| Barium                                    | 6700                   |                          | 54                                | 87                                  | 73 J                                | 72 J                                | 66 J                                | 62                                | 35                                |
| Beryllium                                 | 190                    | 30                       | 0.73 U                            | 1 U                                 | 1.8                                 | 1.3                                 | 1.3                                 | 0.3 U                             | 0.48 U                            |
| Cadmium                                   | 45                     | 7.4                      | 0.15 U                            | 0.4                                 | 0.65                                | 0.51                                | 0.46 J                              | 0.25 R                            | 0.16                              |
| Calcium                                   |                        |                          | 320                               | 700                                 | 770                                 | 700                                 | 520                                 | 270                               | 140                               |
| Chromium                                  | 64                     | 30                       | 16                                | 81                                  | 36 J                                | 29 J                                | 24 J                                | 14                                | 11                                |
| Cobalt                                    | 1900                   |                          | 7                                 | 30                                  | 13                                  | 11                                  | 9.1                                 | 9.5                               | 8.2                               |
| Copper                                    | 4100                   | 620                      | 4.4 J                             | 30 J                                | 15                                  | 11                                  | 4.5                                 | 12 J                              | 3.8 UJ                            |
| Iron                                      | 100000                 |                          | 15000                             | 39000                               | 20000 J                             | 15000 J                             | 15000 J                             | 30000                             | 15000                             |
| Lead                                      | 750                    | 400                      | 2.5                               | 5.9                                 | 15 J                                | 8.5 J                               | 4.8 J                               | 14                                | 7.7                               |
| Magnesium                                 |                        |                          | 6400                              | 10000                               | 10000                               | 9000                                | 8300                                | 4200                              | 5700                              |
| Manganese                                 | 1900                   | 360                      | 270                               | 740                                 | 390 J                               | 350 J                               | 330 J                               | 220                               | 280                               |
| Mercury                                   | 6.2                    | 4.6                      | 0.05 U                            | 0.06 U                              | 0.11 U                              | 0.02 UJ                             | 0.05 UJ                             | 0.06 U                            | 0.05 U                            |
| Nickel                                    | 2000                   | 320                      | 12                                | 52                                  | 29 J                                | 30 J                                | 21 J                                | 6.8                               | 5.2                               |
| Potassium                                 |                        |                          | 5100                              | 6200                                | 7500                                | 6500                                | 6700                                | 3900                              | 4600                              |
| Selenium                                  | 510                    | 78                       | 0.93 U                            | 0.84 UR                             | 2.8 UJ                              | 2.5 UJ                              | 2.4 UJ                              | 0.8 UR                            | 0.74 UR                           |
| Silver                                    | 510                    | 78                       | 0.28 U                            | 0.22 U                              | 0.42 UJ                             | 0.31 UJ                             | 0.64 UJ                             | 0.21 U                            | 0.2 U                             |
| Sodium                                    |                        |                          | 100 U                             | 1300                                | 120 J                               | 110 J                               | 110 J                               | 980                               | 920                               |
| Thallium                                  | 6.7                    | 1.04                     | 0.91 U                            | 2.2 J                               | 2.3 U                               | 2.2 U                               | 2.3 U                               | 1.4 U                             | 1.4 R                             |
| Vanadium                                  | 100                    | 15.6                     | 36                                | 110                                 | 47 J                                | 38 J                                | 38 J                                | 65                                | 33                                |
| Zinc                                      | 100000                 | 4600                     | 25 J                              | 43 J                                | 43 J                                | 34 J                                | 29 J                                | 35 J                              | 21 J                              |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |

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Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-08<br>Oct-02<br>5-7' bls | SS-SF/SB-08<br>Oct-02<br>10-12' bls | SS-SF/SB-08<br>May-04<br>15-17' bls | SS-SF/SB-08<br>May-04<br>20-22' bls | SS-SF/SB-08<br>May-04<br>25-27' bls | SS-SF/SB-09<br>Oct-02<br>2-4' bls | SS-SF/SB-09<br>Oct-02<br>5-7' bls |
|-----------------------------------------------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 1,1'-Biphenyl                                             | 2300000                |                          | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| 2-Methylnaphthalene                                       |                        | 11200                    | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| 3+4-METHYLPHENOLS                                         |                        |                          | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Acetophenone                                              |                        | 98                       | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Benzo(a)pyrene                                            | 210                    | 62                       | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Benzo(g,h,i)perylene                                      |                        |                          | 91 J                              | 410 UJ                              | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Carbazole                                                 | 86000                  |                          | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| CHOLESTEROL                                               |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Chrysene                                                  | 210000                 | 62000                    | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Fluoranthene                                              | 2200000                | 460000                   | 360 U                             | 410 U                               | 350 U                               | 35 J                                | 350 U                               | 380 U                             | 360 U                             |
| Fluorene                                                  | 2600000                | 540000                   | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| HEXADECANOIC ACID                                         |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 360 UJ                            | 410 UJ                              | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Naphthalene                                               | 19000                  | 11200                    | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| OCTABENZONE                                               |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| OCTADECANOIC ACID                                         |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Phenanthrene                                              |                        |                          | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| Phenol                                                    | 100000000              | 3600000                  | 360 U                             | 410 U                               | 350 U                               | 340 U                               | 350 U                               | 380 U                             | 360 U                             |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Pyrene                                                    | 2900000                | 460000                   | 360 U                             | 410 U                               | 350 U                               | 36 J                                | 350 U                               | 380 U                             | 360 U                             |
| TETRADECANOIC ACID                                        |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 3.6 U                             | 4.1 U                               | 3.5 U                               | 3.4 U                               | 3.5 U                               | 3.8 U                             |                                   |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 3.6 U                             | 4.1 U                               | 3.5 U                               | 3.4 U                               | 3.5 U                               | 3.8 U                             |                                   |
| alpha-BHC                                                 | 360                    | 92                       | 1.8 U                             | 2.1 U                               | 1.8 U                               | 1.8 U                               | 1.8 U                               | 2 U                               |                                   |
| alpha-Chlordane                                           |                        |                          | 1.8 U                             | 2.1 U                               | 1.8 U                               | 1.8 U                               | 1.8 U                               | 2 U                               |                                   |
| beta-BHC                                                  | 1300                   | 320                      | 1.8 U                             | 2.1 U                               | 1.8 U                               | 1.8 U                               | 1.8 U                               | 2 U                               |                                   |
| Endosulfan sulfate                                        |                        |                          | 3.6 U                             | 4.1 U                               | 3.5 U                               | 3.4 U                               | 3.5 U                               | 3.8 U                             |                                   |
| gamma-Chlordane                                           |                        |                          | 1.8 U                             | 2.1 U                               | 1.8 U                               | 1.8 U                               | 1.8 U                               | 2 U                               |                                   |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-08<br>Oct-02<br>5-7' bls | SS-SF/SB-08<br>Oct-02<br>10-12' bls | SS-SF/SB-08<br>May-04<br>15-17' bls | SS-SF/SB-08<br>May-04<br>20-22' bls | SS-SF/SB-08<br>May-04<br>25-27' bls | SS-SF/SB-09<br>Oct-02<br>2-4' bls | SS-SF/SB-09<br>Oct-02<br>5-7' bls |
|--------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 1.8 U                             | 2.1 U                               | 1.8 U                               | 1.8 U                               | 1.8 U                               | 2 U                               |                                   |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-08<br>Oct-02<br>5-7' bls | SS-SF/SB-08<br>Oct-02<br>10-12' bls | SS-SF/SB-08<br>May-04<br>15-17' bls | SS-SF/SB-08<br>May-04<br>20-22' bls | SS-SF/SB-08<br>May-04<br>25-27' bls | SS-SF/SB-09<br>Oct-02<br>2-4' bls | SS-SF/SB-09<br>Oct-02<br>5-7' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| 1-HEXACOSANOL                             |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| 2-Butanone                                | 11000000               | 4400000                  | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| 2-Hexanone                                |                        |                          | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Acetone                                   | 5400000                | 2800000                  | 11 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 12 U                              | 12 U                              |
| Benzene                                   | 1400                   | 640                      | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| CAMPHOR                                   |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Carbon Disulfide                          | 720000                 | 72000                    | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Chlorobenzene                             | 53000                  | 30000                    | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Cyclohexane                               | 140000                 |                          | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Ethylbenzene                              | 400000                 | 380000                   | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Isopropylbenzene                          | 200000                 | 114000                   | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Methyl Acetate                            | 9200000                |                          | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Methylcyclohexane                         | 870000                 |                          | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Tetrachloroethene                         | 1300                   | 480                      | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                   |                                   |
| Toluene                                   | 520000                 | 132000                   | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Trichloroethene                           | 110                    | 53                       | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 2 U                                 | 11 U                              | 12 U                              |
| Xylenes (total)                           | 420000                 | 54000                    | 10 U                              | 12 U                                | 10 U                                | 11 U                                | 11 U                                | 11 U                              | 12 U                              |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-12<br>Oct-02<br>2-4' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>Feb-05<br>5-7' bls | SS-SF/SB-12<br>May-04<br>10-12' bls | SS-SF/SB-12<br>Feb-05<br>10-12' bls | SS-SF/SB-12<br>Oct-02<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Aluminum                                  | 100000000              |                          | 18000                             | 28000 J                           | 26000 J                           | 60000                             | 15000                               | 35000                               | 19000                             |
| Antimony                                  | 41                     | 6.2                      | 1.2 J                             | 6.9 UR                            | 6.2 UR                            | 7.7 UR                            | 6.4 UR                              | 1.1 UJ                              | 1 UJ                              |
| Arsenic                                   | 1.6                    | 4.4                      | 1.2 R                             | 0.95 UJ                           | 1.3 UJ                            | 2.2 J                             | 0.83 UJ                             | 1.2 U                               | 1.6                               |
| Barium                                    | 6700                   |                          | 64                                | 48 J                              | 37 J                              | 84                                | 170 J                               | 72                                  | 27                                |
| Beryllium                                 | 190                    | 30                       | 0.39 U                            | 0.64                              | 0.56                              | 0.71                              | 0.4 J                               | 0.91                                | 0.54 U                            |
| Cadmium                                   | 45                     | 7.4                      | 0.14 U                            | 0.7                               | 0.65                              | 0.64 U                            | 1.1                                 | 0.6 U                               | 0.37 R                            |
| Calcium                                   |                        |                          | 200                               | 350 J                             | 390 J                             | 170 J                             | 1700                                | 74 UJ                               | 300                               |
| Chromium                                  | 64                     | 30                       | 14                                | 18 J                              | 14 J                              | 23 J                              | 120 J                               | 8.4 J                               | 36                                |
| Cobalt                                    | 1900                   |                          | 3.4                               | 3.3 UJ                            | 2.6 UJ                            | 7.9 J                             | 3.3 UJ                              | 6.9 J                               | 3.3                               |
| Copper                                    | 4100                   | 620                      | 10 J                              | 12                                | 10                                | 14 J                              | 96                                  | 1 UJ                                | 9.3 J                             |
| Iron                                      | 100000                 |                          | 18000                             | 27000 J                           | 23000 J                           | 36000                             | 14000 J                             | 24000                               | 36000                             |
| Lead                                      | 750                    | 400                      | 14                                | 14 J                              | 12 J                              | 17 J                              | 30 J                                | 6.5 J                               | 10                                |
| Magnesium                                 |                        |                          | 830                               | 1100                              | 1000                              | 2600                              | 800                                 | 5800                                | 460                               |
| Manganese                                 | 1900                   | 360                      | 81                                | 88 J                              | 88 J                              | 270                               | 140 J                               | 460                                 | 110                               |
| Mercury                                   | 6.2                    | 4.6                      | 0.06 U                            | 0.06 UJ                           | 0.06 UJ                           | 0.05 UJ                           | 1.2                                 | 0.1 U                               | 0.06 U                            |
| Nickel                                    | 2000                   | 320                      | 5.1                               | 4.5 UJ                            | 4.6 J                             | 11                                | 8.5 J                               | 7.2                                 | 6.4                               |
| Potassium                                 |                        |                          | 610                               | 1100                              | 1000                              | 2800                              | 660                                 | 5500                                | 340                               |
| Selenium                                  | 510                    | 78                       | 0.82 UJ                           | 1.8 UJ                            | 1.1 UJ                            | 1.3 R                             | 3.8 U                               | 4.2 U                               | 0.87 UJ                           |
| Silver                                    | 510                    | 78                       | 0.22 U                            | 1.1 U                             | 1 U                               | 1.3 U                             | 1.1 U                               | 1.2 U                               | 0.38 R                            |
| Sodium                                    |                        |                          | 660                               | 290 J                             | 170 J                             | 110 UJ                            | 920                                 | 290 UJ                              | 1100                              |
| Thallium                                  | 6.7                    | 1.04                     | 1.5 U                             | 2.9 U                             | 2.6 U                             | 3.2 U                             | 2.7 U                               | 3 U                                 | 3.1 J                             |
| Vanadium                                  | 100                    | 15.6                     | 48                                | 68 J                              | 57 J                              | 87                                | 32 J                                | 57                                  | 100                               |
| Zinc                                      | 100000                 | 4600                     | 18 J                              | 29 J                              | 29 J                              | 32 J                              | 1000 J                              | 27 J                                | 4.3 J                             |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-12<br>Oct-02<br>2-4' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>Feb-05<br>5-7' bls | SS-SF/SB-12<br>May-04<br>10-12' bls | SS-SF/SB-12<br>Feb-05<br>10-12' bls | SS-SF/SB-13<br>Oct-02<br>2-4' bls |
|-----------------------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 1,1'-Biphenyl                                             | 2300000                |                          | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| 2-Methylnaphthalene                                       |                        | 11200                    | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 290 J                               | 400 U                               | 430 U                             |
| 3+4-METHYLPHENOLS                                         |                        |                          | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 1200 J                              | 400 U                               | 430 U                             |
| Acetophenone                                              |                        | 98                       | 400 U                             | 410 U                             | 42 J                              | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Benzo(a)pyrene                                            | 210                    | 62                       | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Benzo(g,h,i)perylene                                      |                        |                          | 400 UJ                            | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 21000                               | 400 U                               | 430 U                             |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Carbazole                                                 | 86000                  |                          | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| CHOLESTEROL                                               |                        |                          |                                   |                                   |                                   | 220 NJ                            |                                     |                                     |                                   |
| Chrysene                                                  | 210000                 | 62000                    | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Fluoranthene                                              | 2200000                | 460000                   | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Fluorene                                                  | 2600000                | 540000                   | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| HEXADECANOIC ACID                                         |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 400 UJ                            | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Naphthalene                                               | 19000                  | 11200                    | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 690 J                               | 400 U                               | 430 U                             |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| OCTABENZONE                                               |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| OCTADECANOIC ACID                                         |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Phenanthrene                                              |                        |                          | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| Phenol                                                    | 100000000              | 3600000                  | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Pyrene                                                    | 2900000                | 460000                   | 400 U                             | 410 U                             | 410 U                             | 410 U                             | 2700 U                              | 400 U                               | 430 U                             |
| TETRADECANOIC ACID                                        |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 4 U                               | 4.1 U                             | 4.1 U                             | 4.1 U                             | 4.4 UR                              | 4 U                                 | 4.2 U                             |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 4 U                               | 4.1 U                             | 4.1 U                             | 4.1 U                             | 4.4 UR                              | 4 U                                 | 4.2 U                             |
| alpha-BHC                                                 | 360                    | 92                       | 2.1 U                             | 2.1 U                             | 2.1 U                             | 2.1 U                             | 2.3 UR                              | 2.1 U                               | 2.2 U                             |
| alpha-Chlordane                                           |                        |                          | 6.1 U                             | 3.3                               | 2.1 U                             | 2.1 U                             | 2.3 UR                              | 2.1 U                               | 2.2 U                             |
| beta-BHC                                                  | 1300                   | 320                      | 2.1 U                             | 2.1 U                             | 2.1 U                             | 2.1 U                             | 2.3 UR                              | 2.1 U                               | 2.2 U                             |
| Endosulfan sulfate                                        |                        |                          | 4 U                               | 4.1 U                             | 4.1 U                             | 4.1 U                             | 4.4 UR                              | 4 U                                 | 4.2 U                             |
| gamma-Chlordane                                           |                        |                          | 3.7                               | 5.9                               | 3                                 | 2.1 U                             | 2.3 UR                              | 2.1 U                               | 2.2 U                             |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-12<br>Oct-02<br>2-4' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>Feb-05<br>5-7' bls | SS-SF/SB-12<br>May-04<br>10-12' bls | SS-SF/SB-12<br>Feb-05<br>10-12' bls | SS-SF/SB-13<br>Oct-02<br>2-4' bls |
|--------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2.1 U                             | 3.1 U                             | 2.3 U                             | 2.1 U                             | 2.3 UR                              | 2.1 U                               | 2.2 U                             |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-12<br>Oct-02<br>2-4' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>May-04<br>5-7' bls | SS-SF/SB-12<br>Feb-05<br>5-7' bls | SS-SF/SB-12<br>May-04<br>10-12' bls | SS-SF/SB-12<br>Feb-05<br>10-12' bls | SS-SF/SB-13<br>Oct-02<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 450 J                               | 15 U                                | 11 U                              |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 210 J                               | 15 U                                | 11 U                              |
| 1-HEXACOSANOL                             |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| 2-Butanone                                | 11000000               | 4400000                  | 12 U                              | 11 UJ                             | 11 UJ                             | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| 2-Hexanone                                |                        |                          | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Acetone                                   | 5400000                | 2800000                  | 12 U                              | 55                                | 21 J                              | 32 J                              | 1500 U                              | 15 U                                | 11 U                              |
| Benzene                                   | 1400                   | 640                      | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| CAMPHOR                                   |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Carbon Disulfide                          | 720000                 | 72000                    | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Chlorobenzene                             | 53000                  | 30000                    | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Cyclohexane                               | 140000                 |                          | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Ethylbenzene                              | 400000                 | 380000                   | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 250 J                               | 15 U                                | 11 U                              |
| Isopropylbenzene                          | 200000                 | 114000                   | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Methyl Acetate                            | 9200000                |                          | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 UJ                             |
| Methylcyclohexane                         | 870000                 |                          | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Tetrachloroethene                         | 1300                   | 480                      | 12 U                              | 11 U                              | 11 U                              | 15 J                              | 1500 U                              | 9 J                                 | 11 U                              |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                   |                                   |                                   |                                   |                                     |                                     |                                   |
| Toluene                                   | 520000                 | 132000                   | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 850 J                               | 15 U                                | 11 U                              |
| Trichloroethene                           | 110                    | 53                       | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 12 U                              | 11 U                              | 11 U                              | 18 U                              | 1500 U                              | 15 U                                | 11 U                              |
| Xylenes (total)                           | 420000                 | 54000                    | 12 U                              | 11 U                              | 2 J                               | 18 U                              | 1000 J                              | 15 U                                | 11 U                              |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-13<br>Oct-02<br>5-7' bls | SS-SF/SB-13<br>Oct-02<br>10-12' bls | SS-SF/SB-13<br>May-04<br>15-17' bls | SS-SF/SB-13<br>May-04<br>20-22' bls | SS-SF/SB-13<br>May-04<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Aluminum                                  | 100000000              |                          | 14000                             | 38000                               | 28000 J                             | 43000 J                             | 53000 J                             | 46000                               | 44000                               |
| Antimony                                  | 41                     | 6.2                      | 1 UJ                              | 0.9 UJ                              | 6.1 UR                              | 5.3 UR                              | 5.5 UR                              | 0.61 UJ                             | 0.8 UJ                              |
| Arsenic                                   | 1.6                    | 4.4                      | 1.9                               | 0.83 U                              | 1 U                                 | 0.89 U                              | 0.92 U                              | 5.8                                 | 7.6                                 |
| Barium                                    | 6700                   |                          | 28                                | 120                                 | 320 J                               | 130 J                               | 94 J                                | 240                                 | 310                                 |
| Beryllium                                 | 190                    | 30                       | 0.5 U                             | 0.91 U                              | 2.3                                 | 1.5                                 | 1.6                                 | 1.1                                 | 1.2                                 |
| Cadmium                                   | 45                     | 7.4                      | 0.29 R                            | 0.13 U                              | 0.78                                | 0.51                                | 0.53                                | 0.64 U                              | 0.65 U                              |
| Calcium                                   |                        |                          | 210                               | 420                                 | 95 J                                | 130 J                               | 180 J                               | 210 J                               | 170 J                               |
| Chromium                                  | 64                     | 30                       | 30                                | 44                                  | 8 J                                 | 6.2 J                               | 6.7 J                               | 12 J                                | 9.7 J                               |
| Cobalt                                    | 1900                   |                          | 2.2                               | 24                                  | 31                                  | 16                                  | 16                                  | 16 J                                | 24 J                                |
| Copper                                    | 4100                   | 620                      | 9.4 J                             | 4.4 UJ                              | 20                                  | 1.9 J                               | 0.69 J                              | 51 J                                | 69 J                                |
| Iron                                      | 100000                 |                          | 28000                             | 17000                               | 32000 J                             | 16000 J                             | 16000 J                             | 47000                               | 49000                               |
| Lead                                      | 750                    | 400                      | 8.2                               | 4.4                                 | 12 J                                | 7.8 J                               | 9.1 J                               | 18 J                                | 21 J                                |
| Magnesium                                 |                        |                          | 270                               | 10000                               | 10000                               | 6500                                | 6100                                | 10000                               | 13000                               |
| Manganese                                 | 1900                   | 360                      | 71                                | 490                                 | 950 J                               | 360 J                               | 370 J                               | 960                                 | 1300                                |
| Mercury                                   | 6.2                    | 4.6                      | 0.06 U                            | 0.06 U                              | 0.27                                | 0.06 UJ                             | 0.07 UJ                             | 0.13 U                              | 0.13 U                              |
| Nickel                                    | 2000                   | 320                      | 5.6                               | 52                                  | 18 J                                | 7.5 J                               | 5.7 J                               | 18 J                                | 20 J                                |
| Potassium                                 |                        |                          | 180                               | 6300                                | 11000                               | 6000                                | 5600                                | 11000                               | 15000                               |
| Selenium                                  | 510                    | 78                       | 0.86 UJ                           | 0.76 UJ                             | 2.9 UJ                              | 2.8 UJ                              | 3.9 J                               | 1.3 J                               | 4.5 U                               |
| Silver                                    | 510                    | 78                       | 0.23 U                            | 0.2 U                               | 1.3                                 | 0.97                                | 0.95                                | 1.3 UJ                              | 1.3 UJ                              |
| Sodium                                    |                        |                          | 970                               | 980                                 | 440 J                               | 240 J                               | 210 J                               | 190 UJ                              | 180 UJ                              |
| Thallium                                  | 6.7                    | 1.04                     | 4.5                               | 1.4 U                               | 2.6 U                               | 2.2 U                               | 2.3 U                               | 3.2 UR                              | 3.2 UR                              |
| Vanadium                                  | 100                    | 15.6                     | 92                                | 54                                  | 288 J                               | 42 J                                | 40 J                                | 130                                 | 130                                 |
| Zinc                                      | 100000                 | 4600                     | 1.4 J                             | 29 J                                | 94 J                                | 32 J                                | 25 J                                | 89 J                                | 110 J                               |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-13<br>Oct-02<br>5-7' bls | SS-SF/SB-13<br>Oct-02<br>10-12' bls | SS-SF/SB-13<br>May-04<br>15-17' bls | SS-SF/SB-13<br>May-04<br>20-22' bls | SS-SF/SB-13<br>May-04<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls |
|-----------------------------------------------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 1,1'-Biphenyl                                             | 2300000                |                          | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| 2-Methylnaphthalene                                       |                        | 11200                    | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| 3+4-METHYLPHENOLS                                         |                        |                          | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Acetophenone                                              |                        | 98                       | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Benzo(a)pyrene                                            | 210                    | 62                       | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Benzo(g,h,i)perylene                                      |                        |                          | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 440 U                             | 380 U                               | 340 J                               | 380 U                               | 370 UJ                              | 430 U                               | 420 U                               |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 440 U                             | 380 U                               | 410 UJ                              | 380 U                               | 370 UJ                              | 430 U                               | 420 U                               |
| Carbazole                                                 | 86000                  |                          | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| CHOLESTEROL                                               |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Chrysene                                                  | 210000                 | 62000                    | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 440 U                             | 380 U                               | 410 UJ                              | 380 U                               | 370 UJ                              | 430 U                               | 420 U                               |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                   |                                     |                                     |                                     |                                     | 170 NJ                              | 160 NJ                              |
| Fluoranthene                                              | 2200000                | 460000                   | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Fluorene                                                  | 2600000                | 540000                   | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| HEXADECANOIC ACID                                         |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Naphthalene                                               | 19000                  | 11200                    | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| OCTABENZONE                                               |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| OCTADECANOIC ACID                                         |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Phenanthrene                                              |                        |                          | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| Phenol                                                    | 100000000              | 3600000                  | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Pyrene                                                    | 2900000                | 460000                   | 440 U                             | 380 U                               | 410 U                               | 380 U                               | 370 U                               | 430 U                               | 420 U                               |
| TETRADECANOIC ACID                                        |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 4.4 U                             | 3.8 U                               | 4.1 U                               | 3.7 U                               | 3.6 U                               | 4.4 U                               | 4.3 U                               |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 4.4 U                             | 3.8 U                               | 4.1 U                               | 3.7 U                               | 3.6 U                               | 4.4 U                               | 4.3 U                               |
| alpha-BHC                                                 | 360                    | 92                       | 2.3 U                             | 1.9 U                               | 2.1 U                               | 1.9 U                               | 1.9 U                               | 2.3 U                               | 2.2 U                               |
| alpha-Chlordane                                           |                        |                          | 2.3 U                             | 1.9 U                               | 2.1 U                               | 1.9 U                               | 1.9 U                               | 2.3 U                               | 2.2 U                               |
| beta-BHC                                                  | 1300                   | 320                      | 2.3 U                             | 1.9 U                               | 2.1 U                               | 1.9 U                               | 1.9 U                               | 2.3 U                               | 2.2 U                               |
| Endosulfan sulfate                                        |                        |                          | 4.4 U                             | 3.8 U                               | 4.1 U                               | 3.7 U                               | 3.6 U                               | 4.4 U                               | 4.3 U                               |
| gamma-Chlordane                                           |                        |                          | 2.3 U                             | 1.9 U                               | 2.1 U                               | 1.9 U                               | 1.9 U                               | 2.3 U                               | 2.2 U                               |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-13<br>Oct-02<br>5-7' bls | SS-SF/SB-13<br>Oct-02<br>10-12' bls | SS-SF/SB-13<br>May-04<br>15-17' bls | SS-SF/SB-13<br>May-04<br>20-22' bls | SS-SF/SB-13<br>May-04<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls |
|--------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2.3 U                             | 1.9 U                               | 2.1 U                               | 1.9 U                               | 1.9 U                               | 2.3 U                               | 2.2 U                               |

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Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-13<br>Oct-02<br>5-7' bls | SS-SF/SB-13<br>Oct-02<br>10-12' bls | SS-SF/SB-13<br>May-04<br>15-17' bls | SS-SF/SB-13<br>May-04<br>20-22' bls | SS-SF/SB-13<br>May-04<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls |
|-------------------------------------------|------------------------|--------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| 1-HEXACOSANOL                             |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| 2-Butanone                                | 11000000               | 4400000                  | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| 2-Hexanone                                |                        |                          | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Acetone                                   | 5400000                | 2800000                  | 13 U                              | 23 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Benzene                                   | 1400                   | 640                      | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| CAMPHOR                                   |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Carbon Disulfide                          | 720000                 | 72000                    | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Chlorobenzene                             | 53000                  | 30000                    | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Cyclohexane                               | 140000                 |                          | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Ethylbenzene                              | 400000                 | 380000                   | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Isopropylbenzene                          | 200000                 | 114000                   | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Methyl Acetate                            | 9200000                |                          | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Methylcyclohexane                         | 870000                 |                          | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Tetrachloroethene                         | 1300                   | 480                      | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 4 J                                 | 25                                  |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                   |                                     |                                     |                                     |                                     |                                     |                                     |
| Toluene                                   | 520000                 | 132000                   | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Trichloroethene                           | 110                    | 53                       | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |
| Xylenes (total)                           | 420000                 | 54000                    | 13 U                              | 13 U                                | 13 U                                | 11 U                                | 11 U                                | 12 U                                | 13 U                                |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-14<br>Feb-05<br>2-4' bls | SS-SB-14<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>5-7' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-16<br>Feb-05<br>5-7' bls | SS-SB-16<br>Feb-05<br>10-12' bls | SS-SB-17<br>Feb-05<br>5-7' bls | SS-SB-17<br>Feb-05<br>10-12' bls | SS-SB-18<br>Feb-05<br>5-7' bls |
|-------------------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Aluminum                                  | 100000000              |                          | 34000 J                        | 74000 J                          | 17000 J                        | 24000 J                          | 31000 J                          | 24000 J                          | 13000 J                        | 18000 J                          | 19000                          | 35000                            |                                |
| Antimony                                  | 41                     | 6.2                      | 7.7 UR                         | 7.1 UR                           | 1.3 UJ                         | 3.2 UJ                           | 2.9 UJ                           | 7.6 UR                           | 7.7 UR                         | 7.5 UR                           | 1.4 UJ                         | 7.3 UR                           |                                |
| Arsenic                                   | 1.6                    | 4.4                      | 0.91 R                         | 2.9 J                            | 1.3 UR                         | 2.7 J                            | 1.4 J                            | 1.2 R                            | 0.71 R                         | 0.83 R                           | 1.2 U                          | 3.3 J                            |                                |
| Barium                                    | 6700                   |                          | 20 J                           | 120                              | 29                             | 39                               | 58                               | 20 J                             | 26 J                           | 22 J                             | 63                             | 16 J                             |                                |
| Beryllium                                 | 190                    | 30                       | 0.39 UJ                        | 1.1                              | 0.41 UJ                        | 1.9                              | 1.9                              | 0.73                             | 0.64 UJ                        | 0.82                             | 0.75                           | 0.36 UJ                          |                                |
| Cadmium                                   | 45                     | 7.4                      | 0.64 U                         | 0.57 J                           | 0.63 U                         | 0.68 U                           | 0.67 U                           | 0.64 U                           | 0.64 U                         | 0.62 U                           | 0.59 U                         | 0.61 U                           |                                |
| Calcium                                   |                        |                          | 39 UJ                          | 110 J                            | 41 UJ                          | 36 UJ                            | 54 UJ                            | 370 J                            | 34 UJ                          | 93 J                             | 48 J                           | 110 J                            |                                |
| Chromium                                  | 64                     | 30                       | 19 J                           | 13 J                             | 10 J                           | 26 J                             | 26 J                             | 16 J                             | 2.5 J                          | 8.2 J                            | 7.4 J                          | 19 J                             |                                |
| Cobalt                                    | 1900                   |                          | 0.31 UJ                        | 10 J                             | 0.63 UJ                        | 10 J                             | 32 J                             | 0.52 UJ                          | 0.92 UJ                        | 0.53 UJ                          | 3.2 J                          | 1.1 J                            |                                |
| Copper                                    | 4100                   | 620                      | 5.4 J                          | 1.2 J                            | 3.8 J                          | 38 J                             | 28 J                             | 7.3 J                            | 1.8 J                          | 3.7 J                            | 4.1 J                          | 8.6 J                            |                                |
| Iron                                      | 100000                 |                          | 36000                          | 15000                            | 25000                          | 59000                            | 61000                            | 34000                            | 16000                          | 30000                            | 17000                          | 31000                            |                                |
| Lead                                      | 750                    | 400                      | 13 J                           | 12 J                             | 12 J                           | 9.7 J                            | 17 J                             | 15 J                             | 8.2 J                          | 12 J                             | 3.9 J                          | 11 J                             |                                |
| Magnesium                                 |                        |                          | 670 J                          | 7100 J                           | 2900 J                         | 770 J                            | 1800 J                           | 540 J                            | 590 J                          | 1200 J                           | 4600                           | 480 J                            |                                |
| Manganese                                 | 1900                   | 360                      | 100 J                          | 320 J                            | 170 J                          | 690 J                            | 1600 J                           | 75 J                             | 150 J                          | 130 J                            | 350                            | 89                               |                                |
| Mercury                                   | 6.2                    | 4.6                      | 0.09 UJ                        | 0.12                             | 0.12 U                         | 0.16                             | 0.14                             | 0.1 UJ                           | 0.06 UJ                        | 0.07 UJ                          | 0.1 U                          | 0.03 UJ                          |                                |
| Nickel                                    | 2000                   | 320                      | 4.5 UJ                         | 20 J                             | 3.8 UJ                         | 3.5 UJ                           | 5.9 J                            | 5.1 J                            | 2.9 UJ                         | 3.5 UJ                           | 5.3                            | 5                                |                                |
| Potassium                                 |                        |                          | 660                            | 3900                             | 2800                           | 610 J                            | 1800                             | 580 J                            | 530 J                          | 1100                             | 5200                           | 510 J                            |                                |
| Selenium                                  | 510                    | 78                       | 2.4 J                          | 4.1 U                            | 4.4 U                          | 2.6 J                            | 3.2 R                            | 2.6 J                            | 4.5 U                          | 4.4 U                            | 4.2 U                          | 2 R                              |                                |
| Silver                                    | 510                    | 78                       | 1.3 U                          | 1.2 U                            | 1.3 U                          | 1.4 U                            | 1.3 U                            | 1.3 U                            | 1.3 U                          | 1.2 U                            | 1.2 U                          | 1.2 U                            |                                |
| Sodium                                    |                        |                          | 62 UJ                          | 110 UJ                           | 110 UJ                         | 100 UJ                           | 99 UJ                            | 62 UJ                            | 69 UJ                          | 170 UJ                           | 190 UJ                         | 56 UJ                            |                                |
| Thallium                                  | 6.7                    | 1.04                     | 3.2 U                          | 3 UJ                             | 3.1 UJ                         | 3.4 UJ                           | 3.4 UJ                           | 3.2 UJ                           | 3.2 UJ                         | 3.1 UJ                           | 3 U                            | 3 U                              |                                |
| Vanadium                                  | 100                    | 15.6                     | 86                             | 54                               | 57                             | 260                              | 260                              | 92                               | 51                             | 80                               | 36                             | 81                               |                                |
| Zinc                                      | 100000                 | 4600                     | 12 J                           | 29 J                             | 18 J                           | 6.4 UJ                           | 13 J                             | 32 J                             | 9.8 J                          | 13 J                             | 26 J                           | 13 J                             |                                |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |

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Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-14<br>Feb-05<br>2-4' bls | SS-SB-14<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>5-7' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-16<br>Feb-05<br>5-7' bls | SS-SB-16<br>Feb-05<br>10-12' bls | SS-SB-17<br>Feb-05<br>5-7' bls | SS-SB-17<br>Feb-05<br>10-12' bls | SS-SB-18<br>Feb-05<br>5-7' bls |
|-----------------------------------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 1,1'-Biphenyl                                             | 2300000                |                          | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| 2-Methylnaphthalene                                       |                        | 11200                    | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| 3+4-METHYLPHENOLS                                         |                        |                          | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Acetophenone                                              |                        | 98                       | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Benzo(a)pyrene                                            | 210                    | 62                       | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Benzo(g,h,i)perylene                                      |                        |                          | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 420 U                          | 430 U                            | 600 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 UJ                         | 420 U                            |                                |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Carbazole                                                 | 86000                  |                          | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| CHOLESTEROL                                               |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Chrysene                                                  | 210000                 | 62000                    | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          | 95 NJ                          |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  | 190 NJ                         |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                | 93 NJ                            |                                |                                  |                                  |                                  | 230 NJ                         |                                  |                                |                                  |                                |
| Fluoranthene                                              | 2200000                | 460000                   | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Fluorene                                                  | 2600000                | 540000                   | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| HEXADECANOIC ACID                                         |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Naphthalene                                               | 19000                  | 11200                    | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| OCTABENZONE                                               |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| OCTADECANOIC ACID                                         |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Phenanthrene                                              |                        |                          | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| Phenol                                                    | 100000000              | 3600000                  | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                |                                  |                                |                                  | 89 NJ                            |                                  |                                |                                  |                                |                                  |                                |
| Pyrene                                                    | 2900000                | 460000                   | 420 U                          | 430 U                            | 400 U                          | 440 U                            | 430 U                            | 410 U                            | 600 UJ                         | 400 U                            | 390 U                          | 420 U                            |                                |
| TETRADECANOIC ACID                                        |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 4.2 UJ                         | 4.3 U                            | 4 UJ                           | 4.4 U                            | 4.3 U                            | 4 U                              | 5.9 U                          | 4 UJ                             | 3.9 U                          | 4.2 U                            |                                |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 4.2 UJ                         | 4.3 U                            | 4 UJ                           | 4.4 U                            | 4.3 U                            | 4 U                              | 5.9 U                          | 4 UJ                             | 3.9 U                          | 4.2 U                            |                                |
| alpha-BHC                                                 | 360                    | 92                       | 2.2 UJ                         | 2.2 U                            | 2 UJ                           | 2.3 U                            | 2.2 U                            | 2.1 U                            | 3.1 U                          | 2.1 UJ                           | 2 U                            | 2.2 U                            |                                |
| alpha-Chlordane                                           |                        |                          | 2.2 UJ                         | 2.2 U                            | 2 UJ                           | 2.3 U                            | 2.2 U                            | 2.1 U                            | 3.1 U                          | 2.1 UJ                           | 2 U                            | 2.2 U                            |                                |
| beta-BHC                                                  | 1300                   | 320                      | 2.2 UJ                         | 2.2 U                            | 2 UJ                           | 2.3 U                            | 2.2 U                            | 2.1 U                            | 3.1 U                          | 2.1 UJ                           | 2 U                            | 2.2 U                            |                                |
| Endosulfan sulfate                                        |                        |                          | 4.2 UJ                         | 4.3 U                            | 4 UJ                           | 4.4 U                            | 4.3 U                            | 4 U                              | 5.9 U                          | 4 UJ                             | 3.9 U                          | 4.2 U                            |                                |
| gamma-Chlordane                                           |                        |                          | 2.2 UJ                         | 2.2 U                            | 2 UJ                           | 2.3 U                            | 2.2 U                            | 2.1 U                            | 3.1 U                          | 2.1 UJ                           | 2 U                            | 2.2 U                            |                                |

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|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-14<br>Feb-05<br>2-4' bls | SS-SB-14<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>5-7' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-16<br>Feb-05<br>5-7' bls | SS-SB-16<br>Feb-05<br>10-12' bls | SS-SB-17<br>Feb-05<br>5-7' bls | SS-SB-17<br>Feb-05<br>10-12' bls | SS-SB-18<br>Feb-05<br>5-7' bls |
|--------------------|------------------------|--------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2.2 UJ                         | 2.2 U                            | 2 UJ                           | 2.3 U                            | 2.2 U                            | 2.1 U                          | 3.1 U                            | 2.1 UJ                         | 2 U                              | 2.2 U                          |

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|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-14<br>Feb-05<br>2-4' bls | SS-SB-14<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>5-7' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-16<br>Feb-05<br>5-7' bls | SS-SB-16<br>Feb-05<br>10-12' bls | SS-SB-17<br>Feb-05<br>5-7' bls | SS-SB-17<br>Feb-05<br>10-12' bls | SS-SB-18<br>Feb-05<br>5-7' bls |
|-------------------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| 1-HEXACOSANOL                             |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| 2-Butanone                                | 11000000               | 4400000                  | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 UJ                          | 15 UJ                            |                                |
| 2-Hexanone                                |                        |                          | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 UJ                          | 15 UJ                            |                                |
| Acetone                                   | 5400000                | 2800000                  | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 20                               | 16 UJ                          | 31 J                             |                                |
| Benzene                                   | 1400                   | 640                      | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| CAMPHOR                                   |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Carbon Disulfide                          | 720000                 | 72000                    | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Chlorobenzene                             | 53000                  | 30000                    | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Cyclohexane                               | 140000                 |                          | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Ethylbenzene                              | 400000                 | 380000                   | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Isopropylbenzene                          | 200000                 | 114000                   | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Methyl Acetate                            | 9200000                |                          | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 UJ                          | 15 UJ                            |                                |
| Methylcyclohexane                         | 870000                 |                          | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Tetrachloroethene                         | 1300                   | 480                      | 4 J                            | 5 J                              | 7 J                            | 3 J                              | 5 J                              | 5 J                              | 3 J                            | 7 J                              | 14 J                           | 12 J                             |                                |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                |                                  |                                |                                  |                                  |                                  |                                |                                  |                                |                                  |                                |
| Toluene                                   | 520000                 | 132000                   | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Trichloroethene                           | 110                    | 53                       | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 15 U                           | 12 U                             | 12 UJ                          | 17 UJ                            | 19 UJ                            | 12 UJ                            | 13 UJ                          | 12 UJ                            | 16 U                           | 15 U                             |                                |
| Xylenes (total)                           | 420000                 | 54000                    | 15 U                           | 12 U                             | 12 U                           | 17 U                             | 19 U                             | 12 U                             | 13 U                           | 12 U                             | 16 U                           | 15 U                             |                                |

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Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-18<br>Feb-05<br>10-12' bls | SS-SB-19<br>Feb-05<br>5-7' bls | SS-SB-20<br>Feb-05<br>5-7' bls | SS-SB-21<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls |
|-------------------------------------------|------------------------|--------------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Aluminum                                  | 100000000              |                          | 12000                            | 19000                          | 34000                          | 33000                          | 81000                          | 50000                            |                                  | 27000                            | 22000                            |
| Antimony                                  | 41                     | 6.2                      | 7.5 UR                           | 7.4 UR                         | 6.6 UR                         | 7.4 UR                         | 7.3 UR                         | 7.3 UR                           |                                  | 0.81 UJ                          | 1.3 UJ                           |
| Arsenic                                   | 1.6                    | 4.4                      | 1.3                              | 2.5                            | 0.9 R                          | 1.7                            | 1.2 R                          | 0.54 R                           |                                  | 1.4 J                            | 0.89 R                           |
| Barium                                    | 6700                   |                          | 26                               | 21 J                           | 31                             | 31                             | 85                             | 100                              |                                  | 67                               | 48                               |
| Beryllium                                 | 190                    | 30                       | 1                                | 1.2                            | 0.33 J                         | 0.44 J                         | 0.84                           | 1                                |                                  | 1.2                              | 0.98                             |
| Cadmium                                   | 45                     | 7.4                      | 0.63 U                           | 0.62 U                         | 0.55 U                         | 0.62 U                         | 0.47 J                         | 0.26 J                           |                                  | 0.69                             | 0.59 U                           |
| Calcium                                   |                        |                          | 15 UJ                            | 47 UJ                          | 150 J                          | 120 J                          | 340 J                          | 330 J                            |                                  | 500 J                            | 440 J                            |
| Chromium                                  | 64                     | 30                       | 5.1 J                            | 12 J                           | 13 J                           | 15 J                           | 146 J                          | 10 J                             |                                  | 148 J                            | 11 J                             |
| Cobalt                                    | 1900                   |                          | 2 J                              | 1 J                            | 1.7 J                          | 1.9 J                          | 7.9 J                          | 20 J                             |                                  | 5.9 J                            | 3.4 J                            |
| Copper                                    | 4100                   | 620                      | 3.4 J                            | 5.7 J                          | 6 J                            | 4.6 J                          | 8.9 J                          | 1.9 J                            |                                  | 89 J                             | 13 J                             |
| Iron                                      | 100000                 |                          | 22000                            | 29000                          | 18000                          | 29000                          | 31000                          | 21000                            |                                  | 25000                            | 18000                            |
| Lead                                      | 750                    | 400                      | 12 J                             | 14 J                           | 8.1 J                          | 12 J                           | 16 J                           | 10 J                             |                                  | 20 J                             | 5.2 J                            |
| Magnesium                                 |                        |                          | 670                              | 1000                           | 590                            | 1900                           | 3500                           | 6800                             |                                  | 7700                             | 6100                             |
| Manganese                                 | 1900                   | 360                      | 270                              | 81                             | 54                             | 120                            | 210                            | 720                              |                                  | 470                              | 350                              |
| Mercury                                   | 6.2                    | 4.6                      | 0.1 U                            | 0.12 U                         | 0.11 U                         | 0.12 U                         | 0.12 U                         | 0.08 UJ                          |                                  | 0.11 U                           | 0.07 UJ                          |
| Nickel                                    | 2000                   | 320                      | 2.6 UJ                           | 3.7 UJ                         | 6.4 J                          | 7.9 J                          | 22 J                           | 7.1 J                            |                                  | 120 J                            | 11 J                             |
| Potassium                                 |                        |                          | 640                              | 660                            | 520 J                          | 1700                           | 2900                           | 4500                             |                                  | 5400                             | 4100                             |
| Selenium                                  | 510                    | 78                       | 4.4 U                            | 4.3 U                          | 3.9 U                          | 1.9 J                          | 2.6 J                          | 4.3 U                            |                                  | 3.8 U                            | 4.1 U                            |
| Silver                                    | 510                    | 78                       | 1.3 U                            | 1.2 UJ                         | 1.1 UJ                         | 1.2 UJ                         | 1.2 UJ                         | 1.2 UJ                           |                                  | 2 J                              | 1.2 UJ                           |
| Sodium                                    |                        |                          | 82 UJ                            | 55 UJ                          | 210 UJ                         | 120 UJ                         | 120 UJ                         | 210 UJ                           |                                  | 130 UJ                           | 130 UJ                           |
| Thallium                                  | 6.7                    | 1.04                     | 3.1 U                            | 3.1 UR                         | 2.8 UR                         | 3.1 UR                         | 3.1 UR                         | 3.1 UR                           |                                  | 2.7 UR                           | 3 UR                             |
| Vanadium                                  | 100                    | 15.6                     | 69                               | 94                             | 42                             | 69                             | 75                             | 45                               |                                  | 47                               | 38                               |
| Zinc                                      | 100000                 | 4600                     | 11 J                             | 16 J                           | 22 J                           | 26 J                           | 36 J                           | 29 J                             |                                  | 98 J                             | 49 J                             |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| TEQ (TOXIC EQUIV. VALUE, FROM I-TEF/89)   | 16                     |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |

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Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-18<br>Feb-05<br>10-12' bls | SS-SB-19<br>Feb-05<br>5-7' bls | SS-SB-20<br>Feb-05<br>5-7' bls | SS-SB-21<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls |
|-----------------------------------------------------------|------------------------|--------------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| 1,1'-Biphenyl                                             | 2300000                |                          | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| 2-Methylnaphthalene                                       |                        | 11200                    | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| 3+4-METHYLPHENOLS                                         |                        |                          | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Acetophenone                                              |                        | 98                       | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Benzo(a)pyrene                                            | 210                    | 62                       | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Benzo(g,h,i)perylene                                      |                        |                          | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| BENZOIC ACID                                              | 100000000              | 480000000                |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Carbazole                                                 | 86000                  |                          | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| CHOLESTEROL                                               |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Chrysene                                                  | 210000                 | 62000                    | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                  |                                |                                |                                |                                | 230 NJ                           |                                  |                                  |                                  |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                  | 110 NJ                         | 110 NJ                         | 130 NJ                         |                                |                                  | 120 NJ                           | 120 NJ                           |                                  |
| Fluoranthene                                              | 2200000                | 460000                   | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Fluorene                                                  | 2600000                | 540000                   | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| HEXADECANOIC ACID                                         |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Naphthalene                                               | 19000                  | 11200                    | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| OCTABENZONE                                               |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| OCTADECANOIC ACID                                         |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Phenanthrene                                              |                        |                          | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| Phenol                                                    | 100000000              | 3600000                  | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 210 NJ                           |                                  |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Pyrene                                                    | 2900000                | 460000                   | 400 U                            | 410 U                          | 400 U                          | 400 U                          | 420 U                          | 410 U                            | 420 U                            | 350 U                            |                                  |
| TETRADECANOIC ACID                                        |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 4 U                              | 4.1 U                          | 4 U                            | 4 U                            | 4.2 U                          | 4.1 U                            | 4.2 U                            | 3.5 U                            |                                  |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 4 U                              | 4.1 U                          | 4 U                            | 4 U                            | 4.2 U                          | 4.1 U                            | 4.2 U                            | 3.5 U                            |                                  |
| alpha-BHC                                                 | 360                    | 92                       | 2 U                              | 2.1 U                          | 2 U                            | 2.1 U                          | 2.2 U                          | 2.1 U                            | 2.1 U                            | 1.8 U                            |                                  |
| alpha-Chlordane                                           |                        |                          | 2 U                              | 2.1 U                          | 2 U                            | 2.1 U                          | 2.2 U                          | 2.1 U                            | 2.1 U                            | 1.8 U                            |                                  |
| beta-BHC                                                  | 1300                   | 320                      | 2 U                              | 2.1 U                          | 2 U                            | 2.1 U                          | 2.2 U                          | 2.1 U                            | 2.1 U                            | 1.8 U                            |                                  |
| Endosulfan sulfate                                        |                        |                          | 4 U                              | 4.1 U                          | 4 U                            | 4 U                            | 4.2 U                          | 4.1 U                            | 4.2 U                            | 3.5 U                            |                                  |
| gamma-Chlordane                                           |                        |                          | 2 U                              | 2.1 U                          | 2 U                            | 2.1 U                          | 2.2 U                          | 2.1 U                            | 2.1 U                            | 1.8 U                            |                                  |

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Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-18<br>Feb-05<br>10-12' bls | SS-SB-19<br>Feb-05<br>5-7' bls | SS-SB-20<br>Feb-05<br>5-7' bls | SS-SB-21<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls |
|--------------------|------------------------|--------------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2 U                              | 2.1 U                          | 2 U                            | 2.1 U                          | 2.2 U                          | 2.1 U                            | 2.1 U                            | 1.8 U                            |                                  |

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|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-18<br>Feb-05<br>10-12' bls | SS-SB-19<br>Feb-05<br>5-7' bls | SS-SB-20<br>Feb-05<br>5-7' bls | SS-SB-21<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>10-12' bls |
|-------------------------------------------|------------------------|--------------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| 1-HEXACOSANOL                             |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 810 NJ                           |                                  |
| 2-Butanone                                | 11000000               | 4400000                  | 15 UJ                            | 11 U                           | 11 UJ                          | 11 UJ                          | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| 2-Hexanone                                |                        |                          | 15 UJ                            | 11 U                           | 11 UJ                          | 11 UJ                          | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Acetone                                   | 5400000                | 2800000                  | 15 UJ                            | 11 U                           | 11 J                           | 44 J                           | 13 U                           | 12 U                             | 12 J                             | 1300 U                           |                                  |
| Benzene                                   | 1400                   | 640                      | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 570 NJ                           |                                  |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 980 NJ                           |                                  |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 830 NJ                           |                                  |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 700 NJ                           |                                  |
| CAMPHOR                                   |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  |                                  |                                  |
| Carbon Disulfide                          | 720000                 | 72000                    | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 140 J                            |                                  |
| Chlorobenzene                             | 53000                  | 30000                    | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Cyclohexane                               | 140000                 |                          | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Ethylbenzene                              | 400000                 | 380000                   | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 290 J                            |                                  |
| Isopropylbenzene                          | 200000                 | 114000                   | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Methyl Acetate                            | 9200000                |                          | 15 UJ                            | 11 U                           | 11 UJ                          | 11 UJ                          | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Methylcyclohexane                         | 870000                 |                          | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 520 J                            |                                  |
| Tetrachloroethene                         | 1300                   | 480                      | 12 J                             | 18                             | 3 J                            | 6 J                            | 10 J                           | 9 J                              | 11 J                             | 1300 U                           |                                  |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                  |                                |                                |                                |                                |                                  |                                  | 2100 NJ                          |                                  |
| Toluene                                   | 520000                 | 132000                   | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 150 J                            |                                  |
| Trichloroethene                           | 110                    | 53                       | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1300 U                           |                                  |
| Xylenes (total)                           | 420000                 | 54000                    | 15 U                             | 11 U                           | 11 U                           | 11 U                           | 13 U                           | 12 U                             | 12 U                             | 1000 J                           |                                  |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-24<br>Feb-05<br>2-4' bls | SS-SB-24<br>Feb-05<br>10-12' bls | SS-SB-25<br>Feb-05<br>10-12' bls | SS-SB-26<br>Feb-05<br>5-7' bls | SS-SB-26<br>Feb-05<br>10-12' bls | SS-SB-27<br>Feb-05<br>5-7' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Aluminum                                  | 10000000               |                          | 73000 J                        | 43000 J                          | 62000 J                          | 66000 J                        | 60000 J                          | 63000 J                        | 29000                              | 42000                              |
| Antimony                                  | 41                     | 6.2                      | 7.3 UR                         | 7.9 UR                           | 7 UR                             | 7.4 UR                         | 7.8 UR                           | 7.6 UR                         | 7.4 UR                             | 7.5 UR                             |
| Arsenic                                   | 1.6                    | 4.4                      | 1.6 J                          | 1.3 UR                           | 0.9 R                            | 0.54 R                         | 1.3 UR                           | 0.72 R                         | 1.1 R                              | 1.1 R                              |
| Barium                                    | 6700                   |                          | 130                            | 94                               | 140                              | 130                            | 140                              | 100                            | 29                                 | 41                                 |
| Beryllium                                 | 190                    | 30                       | 0.94                           | 2                                | 1.2 U                            | 0.73                           | 1.2                              | 0.71 UJ                        | 0.34 J                             | 0.48 J                             |
| Cadmium                                   | 45                     | 7.4                      | 0.6 U                          | 0.66 U                           | 0.27 J                           | 0.25 J                         | 0.65 U                           | 0.17 R                         | 0.62 U                             | 0.62 U                             |
| Calcium                                   |                        |                          | 210 J                          | 86 J                             | 120 J                            | 140 J                          | 260 J                            | 150 J                          | 100 J                              | 150 J                              |
| Chromium                                  | 64                     | 30                       | 46 J                           | 210 J                            | 14 J                             | 30 J                           | 130 J                            | 24 J                           | 12 J                               | 18 J                               |
| Cobalt                                    | 1900                   |                          | 9.3 J                          | 45 J                             | 39 J                             | 6.2 J                          | 29 J                             | 7.6 J                          | 2 J                                | 3 J                                |
| Copper                                    | 4100                   | 620                      | 8.9 J                          | 11 J                             | 8.7 J                            | 31 J                           | 7.9 J                            | 5.5 J                          | 4.3 J                              | 6.1 J                              |
| Iron                                      | 100000                 |                          | 32000                          | 52000                            | 26000                            | 30000                          | 43000                            | 31000                          | 15000                              | 24000                              |
| Lead                                      | 750                    | 400                      | 18                             | 13 J                             | 11 J                             | 17 J                           | 12 J                             | 12 J                           | 17 J                               | 38 J                               |
| Magnesium                                 |                        |                          | 5600 J                         | 4100 J                           | 7100 J                           | 3700 J                         | 6200 J                           | 3800 J                         | 650                                | 910                                |
| Manganese                                 | 1900                   | 360                      | 260 J                          | 1500 J                           | 860 J                            | 180 J                          | 690 J                            | 240 J                          | 41                                 | 67                                 |
| Mercury                                   | 6.2                    | 4.6                      | 0.17                           | 0.11 UJ                          | 0.05 UJ                          | 0.09 UJ                        | 0.09 UJ                          | 0.17                           | 0.07 UJ                            | 0.07 UJ                            |
| Nickel                                    | 2000                   | 320                      | 31 J                           | 36 J                             | 21 J                             | 13 J                           | 29 J                             | 13 J                           | 5.5 J                              | 8.2 J                              |
| Potassium                                 |                        |                          | 4200                           | 2800                             | 6000                             | 2800                           | 4100                             | 3000                           | 560 J                              | 790                                |
| Selenium                                  | 510                    | 78                       | 4.2 U                          | 2 J                              | 4.1 U                            | 4.3 U                          | 2 R                              | 2.2 R                          | 4.3 U                              | 4.4 U                              |
| Silver                                    | 510                    | 78                       | 1.2 U                          | 1.3 U                            | 1.2 U                            | 1.2 U                          | 1.3 U                            | 1.3 U                          | 1.2 UJ                             | 1.2 UJ                             |
| Sodium                                    |                        |                          | 58 UJ                          | 68 UJ                            | 100 UJ                           | 86 UJ                          | 81 UJ                            | 88 UJ                          | 180 UJ                             | 250 UJ                             |
| Thallium                                  | 6.7                    | 1.04                     | 3 UJ                           | 3.3 UJ                           | 2.9 UJ                           | 3.1 UJ                         | 3.2 UJ                           | 3.2 UJ                         | 3.1 UR                             | 3.1 UR                             |
| Vanadium                                  | 100                    | 15.6                     | 82                             | 190                              | 66                               | 72                             | 140                              | 72                             | 38                                 | 59                                 |
| Zinc                                      | 100000                 | 4600                     | 40 J                           | 21 J                             | 47 J                             | 50 J                           | 33 J                             | 33 J                           | 16 J                               | 25 J                               |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-24<br>Feb-05<br>2-4' bls | SS-SB-24<br>Feb-05<br>10-12' bls | SS-SB-25<br>Feb-05<br>10-12' bls | SS-SB-26<br>Feb-05<br>5-7' bls | SS-SB-26<br>Feb-05<br>10-12' bls | SS-SB-27<br>Feb-05<br>5-7' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls |
|-----------------------------------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|------------------------------------|------------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 1,1'-Biphenyl                                             | 2300000                |                          | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| 2-Methylnaphthalene                                       |                        | 11200                    | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| 3+4-METHYLPHENOLS                                         |                        |                          | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| 4-Chloroaniline                                           | 250000                 | 48000                    | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Acetophenone                                              |                        | 98                       | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Benzo(a)anthracene                                        | 2100                   | 620                      | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Benzo(a)pyrene                                            | 210                    | 62                       | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Benzo(g,h,i)perylene                                      |                        |                          | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                |                                  |                                  | 85 NJ                          |                                  |                                |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    | 810 U                          | 450 U                            | 380 U                            | 950 U                          | 400 U                            | 420 U                          |                                    |                                    |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  | 400 U                          | 450 U                            | 380 U                            | 430                            | 400 U                            | 420 U                          |                                    |                                    |
| Carbazole                                                 | 86000                  |                          | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| CHOLESTEROL                                               |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Chrysene                                                  | 210000                 | 62000                    | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Di-n-octylphthalate                                       | 2500000                | 480000                   | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          | 170 NJ                         |                                  |                                  |                                |                                  |                                |                                    |                                    |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                |                                  |                                  | 110 NJ                         | 95 NJ                            |                                |                                    |                                    |
| Fluoranthene                                              | 2200000                | 460000                   | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Fluorene                                                  | 2600000                | 540000                   | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| HEXADECANOIC ACID                                         |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Naphthalene                                               | 19000                  | 11200                    | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| OCTABENZONE                                               |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| OCTADECANOIC ACID                                         |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Phenanthrene                                              |                        |                          | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| Phenol                                                    | 100000000              | 3600000                  | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                |                                  |                                  |                                | 110 NJ                           |                                |                                    |                                    |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Pyrene                                                    | 2900000                | 460000                   | 400 U                          | 450 U                            | 380 U                            | 420 U                          | 400 U                            | 420 U                          |                                    |                                    |
| TETRADECANOIC ACID                                        |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 4,4'-DDE                                                  | 7000                   | 1700                     | 3.9 U                          | 4.5 U                            | 3.8 U                            | 4.2 U                          | 4 U                              | 4.1 U                          |                                    |                                    |
| 4,4'-DDT                                                  | 7000                   | 1700                     | 3.9 U                          | 4.5 U                            | 3.8 U                            | 4.2 U                          | 4 U                              | 4.1 U                          |                                    |                                    |
| alpha-BHC                                                 | 360                    | 92                       | 2 U                            | 2.3 U                            | 2 U                              | 2.2 U                          | 2.1 U                            | 2.1 U                          |                                    |                                    |
| alpha-Chlordane                                           |                        |                          | 2 U                            | 2.3 U                            | 2 U                              | 2.2 U                          | 2.1 U                            | 2.1 U                          |                                    |                                    |
| beta-BHC                                                  | 1300                   | 320                      | 2 U                            | 2.3 U                            | 2 U                              | 2.2 U                          | 2.1 U                            | 2.1 U                          |                                    |                                    |
| Endosulfan sulfate                                        |                        |                          | 3.9 U                          | 4.5 U                            | 3.8 U                            | 4.2 U                          | 4 U                              | 4.1 U                          |                                    |                                    |
| gamma-Chlordane                                           |                        |                          | 2 U                            | 2.3 U                            | 2 U                              | 2.2 U                          | 2.1 U                            | 2.1 U                          |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-24<br>Feb-05<br>2-4' bls | SS-SB-24<br>Feb-05<br>10-12' bls | SS-SB-25<br>Feb-05<br>10-12' bls | SS-SB-26<br>Feb-05<br>5-7' bls | SS-SB-26<br>Feb-05<br>10-12' bls | SS-SB-27<br>Feb-05<br>5-7' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls |
|--------------------|------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|------------------------------------|------------------------------------|
| Heptachlor epoxide | 190                    | 53                       | 2 U                            | 2.3 U                            | 2 U                              | 2.2 U                          | 2.1 U                            | 2.1 U                          |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-24<br>Feb-05<br>2-4' bls | SS-SB-24<br>Feb-05<br>10-12' bls | SS-SB-25<br>Feb-05<br>10-12' bls | SS-SB-26<br>Feb-05<br>5-7' bls | SS-SB-26<br>Feb-05<br>10-12' bls | SS-SB-27<br>Feb-05<br>5-7' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|------------------------------------|------------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 1,1-Dichloroethane                        | 170000                 | 102000                   | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| 1-HEXACOSANOL                             |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| 2-Butanone                                | 11000000               | 4400000                  | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| 2-Hexanone                                |                        |                          | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Acetone                                   | 5400000                | 2800000                  | 16 U                           | 13 U                             | 61                               | 48                             | 14 U                             | 12 U                           |                                    |                                    |
| Benzene                                   | 1400                   | 640                      | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| CAMPHOR                                   |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Carbon Disulfide                          | 720000                 | 72000                    | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Chlorobenzene                             | 53000                  | 30000                    | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Cyclohexane                               | 140000                 |                          | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Ethylbenzene                              | 400000                 | 380000                   | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Isopropylbenzene                          | 200000                 | 114000                   | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Methyl Acetate                            | 9200000                |                          | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Methylcyclohexane                         | 870000                 |                          | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Tetrachloroethene                         | 1300                   | 480                      | 3 J                            | 3 J                              | 4 J                              | 6 J                            | 5 J                              | 4 J                            |                                    |                                    |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                |                                  |                                  |                                |                                  |                                |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Trichloroethene                           | 110                    | 53                       | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Trichlorofluoromethane                    | 200000                 | 78000                    | 4 J                            | 11 J                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |
| Xylenes (total)                           | 420000                 | 54000                    | 11 U                           | 13 U                             | 11 U                             | 11 U                           | 14 U                             | 12 U                           |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C24<br>Feb-05<br>2-4' bls | SS-SF/SB-D23<br>Feb-05<br>2-4' bls | SS-SF/SB-E12<br>Feb-05<br>2-4' bls | SS-SF/SB-F05<br>Feb-05<br>2-4' bls | SS-SF/SB-F09<br>Feb-05<br>2-4' bls | SS-SF/SB-H09<br>Feb-05<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Aluminum                                  | 100000000              |                          | 8900                               | 36000                              | 38000                              | 25000                              | 30000                              | 84000                              |
| Antimony                                  | 41                     | 6.2                      | 6.6 UR                             | 8.1 UR                             | 7.9 UR                             | 7.5 UR                             | 7.3 UR                             | 7.2 UR                             |
| Arsenic                                   | 1.6                    | 4.4                      | 0.62 R                             | 2.7                                | 1.3 R                              | 2.2                                | 2                                  | 1.9 J                              |
| Barium                                    | 6700                   |                          | 24                                 | 20 J                               | 24 J                               | 13 J                               | 45                                 | 68                                 |
| Beryllium                                 | 190                    | 30                       | 0.2 J                              | 0.58 J                             | 0.34 J                             | 1.2                                | 0.66                               | 1.1                                |
| Cadmium                                   | 45                     | 7.4                      | 0.55 U                             | 0.67 U                             | 0.66 U                             | 0.62 U                             | 0.61 U                             | 0.6                                |
| Calcium                                   |                        |                          | 280 J                              | 130 J                              | 170 J                              | 8.8 UJ                             | 450 J                              | 810                                |
| Chromium                                  | 64                     | 30                       | 21 J                               | 238 J                              | 17 J                               | 100 J                              | 29 J                               | 22 J                               |
| Cobalt                                    | 1900                   |                          | 0.87 J                             | 1.4 J                              | 1.6 J                              | 6.2 U                              | 4.2 J                              | 9.5 J                              |
| Copper                                    | 4100                   | 620                      | 5.6 J                              | 33 J                               | 7.1 J                              | 23 J                               | 11 J                               | 6.3 J                              |
| Iron                                      | 100000                 |                          | 11000                              | 57000                              | 25000                              | 47000                              | 35000                              | 32000                              |
| Lead                                      | 750                    | 400                      | 4.4 J                              | 11 J                               | 10 J                               | 12 J                               | 18 J                               | 16 J                               |
| Magnesium                                 |                        |                          | 320 J                              | 840                                | 540 J                              | 550 J                              | 1500                               | 6000                               |
| Manganese                                 | 1900                   | 360                      | 70                                 | 100                                | 48                                 | 98                                 | 140                                | 260                                |
| Mercury                                   | 6.2                    | 4.6                      | 0.11 U                             | 0.12 UJ                            | 0.08 UJ                            | 0.12 U                             | 0.07 UJ                            | 0.05 UJ                            |
| Nickel                                    | 2000                   | 320                      | 4.2 UJ                             | 11 J                               | 6.5 J                              | 7.6 J                              | 6.5 J                              | 16 J                               |
| Potassium                                 |                        |                          | 290 J                              | 470 J                              | 520 J                              | 220 J                              | 1300                               | 5000                               |
| Selenium                                  | 510                    | 78                       | 3.8 U                              | 4 J                                | 2.3 J                              | 3.3 J                              | 2.7 J                              | 1.6 R                              |
| Silver                                    | 510                    | 78                       | 1.1 UJ                             | 1.3 UJ                             | 1.3 UJ                             | 1.2 UJ                             | 1.2 UJ                             | 1.2 UJ                             |
| Sodium                                    |                        |                          | 54 UJ                              | 22 UJ                              | 210 UJ                             | 620 U                              | 67 UJ                              | 280 UJ                             |
| Thallium                                  | 6.7                    | 1.04                     | 2.7 UR                             | 3.4 UR                             | 3.3 UR                             | 3.1 UR                             | 3 UR                               | 3 UR                               |
| Vanadium                                  | 100                    | 15.6                     | 24                                 | 150                                | 61                                 | 140                                | 69                                 | 72                                 |
| Zinc                                      | 100000                 | 4600                     | 8.7 J                              | 19 J                               | 27 J                               | 11 J                               | 34 J                               | 48 J                               |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                    |                                    |                                    |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C24<br>Feb-05<br>2-4' bls | SS-SF/SB-D23<br>Feb-05<br>2-4' bls | SS-SF/SB-E12<br>Feb-05<br>2-4' bls | SS-SF/SB-F05<br>Feb-05<br>2-4' bls | SS-SF/SB-F09<br>Feb-05<br>2-4' bls | SS-SF/SB-H09<br>Feb-05<br>2-4' bls |
|-----------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,1'-Biphenyl                                             | 2300000                |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 2-Methylnaphthalene                                       |                        | 11200                    |                                    |                                    |                                    |                                    |                                    |                                    |
| 3+4-METHYLPHENOLS                                         |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 4-Chloroaniline                                           | 250000                 | 48000                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Acetophenone                                              |                        | 98                       |                                    |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)anthracene                                        | 2100                   | 620                      |                                    |                                    |                                    |                                    |                                    |                                    |
| Benzo(a)pyrene                                            | 210                    | 62                       |                                    |                                    |                                    |                                    |                                    |                                    |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      |                                    |                                    |                                    |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                                      |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     |                                    |                                    |                                    |                                    |                                    |                                    |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                    |                                    |                                    |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    |                                    |                                    |                                    |                                    |                                    |                                    |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  |                                    |                                    |                                    |                                    |                                    |                                    |
| Carbazole                                                 | 86000                  |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| CHOLESTEROL                                               |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Chrysene                                                  | 210000                 | 62000                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       |                                    |                                    |                                    |                                    |                                    |                                    |
| Di-n-octylphthalate                                       | 2500000                | 480000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Fluoranthene                                              | 2200000                | 460000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| Fluorene                                                  | 2600000                | 540000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| HEXADECANOIC ACID                                         |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      |                                    |                                    |                                    |                                    |                                    |                                    |
| Naphthalene                                               | 19000                  | 11200                    |                                    |                                    |                                    |                                    |                                    |                                    |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| OCTABENZONE                                               |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| OCTADECANOIC ACID                                         |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Phenanthrene                                              |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Phenol                                                    | 100000000              | 3600000                  |                                    |                                    |                                    |                                    |                                    |                                    |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Pyrene                                                    | 2900000                | 460000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| TETRADECANOIC ACID                                        |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDE                                                  | 7000                   | 1700                     |                                    |                                    |                                    |                                    |                                    |                                    |
| 4,4'-DDT                                                  | 7000                   | 1700                     |                                    |                                    |                                    |                                    |                                    |                                    |
| alpha-BHC                                                 | 360                    | 92                       |                                    |                                    |                                    |                                    |                                    |                                    |
| alpha-Chlordane                                           |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| beta-BHC                                                  | 1300                   | 320                      |                                    |                                    |                                    |                                    |                                    |                                    |
| Endosulfan sulfate                                        |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| gamma-Chlordane                                           |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C24<br>Feb-05<br>2-4' bls | SS-SF/SB-D23<br>Feb-05<br>2-4' bls | SS-SF/SB-E12<br>Feb-05<br>2-4' bls | SS-SF/SB-F05<br>Feb-05<br>2-4' bls | SS-SF/SB-F09<br>Feb-05<br>2-4' bls | SS-SF/SB-H09<br>Feb-05<br>2-4' bls |
|--------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Heptachlor epoxide | 190                    | 53                       |                                    |                                    |                                    |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C24<br>Feb-05<br>2-4' bls | SS-SF/SB-D23<br>Feb-05<br>2-4' bls | SS-SF/SB-E12<br>Feb-05<br>2-4' bls | SS-SF/SB-F05<br>Feb-05<br>2-4' bls | SS-SF/SB-F09<br>Feb-05<br>2-4' bls | SS-SF/SB-H09<br>Feb-05<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,1-Dichloroethane                        | 170000                 | 102000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     |                                    |                                    |                                    |                                    |                                    |                                    |
| 1-HEXACOSANOL                             |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| 2-Butanone                                | 11000000               | 4400000                  |                                    |                                    |                                    |                                    |                                    |                                    |
| 2-Hexanone                                |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Acetone                                   | 5400000                | 2800000                  |                                    |                                    |                                    |                                    |                                    |                                    |
| Benzene                                   | 1400                   | 640                      |                                    |                                    |                                    |                                    |                                    |                                    |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| CAMPHOR                                   |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Carbon Disulfide                          | 720000                 | 72000                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Chlorobenzene                             | 53000                  | 30000                    |                                    |                                    |                                    |                                    |                                    |                                    |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     |                                    |                                    |                                    |                                    |                                    |                                    |
| Cyclohexane                               | 140000                 |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Ethylbenzene                              | 400000                 | 380000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| Isopropylbenzene                          | 200000                 | 114000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| Methyl Acetate                            | 9200000                |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Methylcyclohexane                         | 870000                 |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Tetrachloroethene                         | 1300                   | 480                      |                                    |                                    |                                    |                                    |                                    |                                    |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |                                    |                                    |                                    |
| Trichloroethene                           | 110                    | 53                       |                                    |                                    |                                    |                                    |                                    |                                    |
| Trichlorofluoromethane                    | 200000                 | 78000                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Xylenes (total)                           | 420000                 | 54000                    |                                    |                                    |                                    |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H19<br>Feb-05<br>2-4' bls | SS-SF/SB-J05<br>Feb-05<br>2-4' bls | SS-SF/SB-J25<br>Feb-05<br>2-4' bls |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (mg/kg)</b>        |                        |                          |                                    |                                    |                                    |
| Aluminum                                  | 100000000              |                          | 28000                              | 22000                              | 29000                              |
| Antimony                                  | 41                     | 6.2                      | 7.3 UR                             | 6.9 UR                             | 7.7 UR                             |
| Arsenic                                   | 1.6                    | 4.4                      | 0.1.7                              | 0.49 R                             | 3.1                                |
| Barium                                    | 6700                   |                          | 73                                 | 44                                 | 16 J                               |
| Beryllium                                 | 190                    | 30                       | 0.5 J                              | 0.23 J                             | 0.49 J                             |
| Cadmium                                   | 45                     | 7.4                      | 0.61 U                             | 0.57 U                             | 0.64 U                             |
| Calcium                                   |                        |                          | 520 J                              | 230 J                              | 35 UJ                              |
| Chromium                                  | 64                     | 30                       | 16 J                               | 17 J                               | 21 J                               |
| Cobalt                                    | 1900                   |                          | 4.2 J                              | 0.89 J                             | 2.2 J                              |
| Copper                                    | 4100                   | 620                      | 6.7 J                              | 5.4 J                              | 14 J                               |
| Iron                                      | 100000                 |                          | 19000                              | 6000                               | 36000                              |
| Lead                                      | 750                    | 400                      | 16 J                               | 7.2 J                              | 10 J                               |
| Magnesium                                 |                        |                          | 710                                | 370 J                              | 520 J                              |
| Manganese                                 | 1900                   | 360                      | 450                                | 23                                 | 130                                |
| Mercury                                   | 6.2                    | 4.6                      | 0.07 UJ                            | 0.11 U                             | 0.06 UJ                            |
| Nickel                                    | 2000                   | 320                      | 7 J                                | 4.6 J                              | 6.9 J                              |
| Potassium                                 |                        |                          | 660                                | 400 J                              | 540 J                              |
| Selenium                                  | 510                    | 78                       | 4.3 U                              | 4 U                                | 1.8 J                              |
| Silver                                    | 510                    | 78                       | 1.2 UJ                             | 1.1 UJ                             | 1.3 UJ                             |
| Sodium                                    |                        |                          | 53 UJ                              | 62 UJ                              | 34 UJ                              |
| Thallium                                  | 6.7                    | 1.04                     | 3 UR                               | 2.9 UR                             | 3.2 UR                             |
| Vanadium                                  | 100                    | 15.6                     | 43                                 | 34                                 | 89                                 |
| Zinc                                      | 100000                 | 4600                     | 28 J                               | 10 J                               | 16 J                               |
| <b>Dioxins / Furans (ng/kg)</b>           |                        |                          |                                    |                                    |                                    |
| 1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN |                        |                          |                                    |                                    |                                    |
| 1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN    |                        |                          |                                    |                                    |                                    |
| HEPTACHLORODIBENZODIOXIN (TOTAL)          |                        |                          |                                    |                                    |                                    |
| HEPTACHLORODIBENZOFURAN (TOTAL)           |                        |                          |                                    |                                    |                                    |
| HEXACHLORODIBENZODIOXIN (TOTAL)           |                        |                          |                                    |                                    |                                    |
| OCTACHLORODIBENZODIOXIN                   |                        |                          |                                    |                                    |                                    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89)  | 16                     |                          |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H19<br>Feb-05<br>2-4' bls | SS-SF/SB-J05<br>Feb-05<br>2-4' bls | SS-SF/SB-J25<br>Feb-05<br>2-4' bls |
|-----------------------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Extractable Organic Compounds (ug/kg)</b>              |                        |                          |                                    |                                    |                                    |
| 1,1'-Biphenyl                                             | 2300000                |                          |                                    |                                    |                                    |
| 2-Methylnaphthalene                                       |                        | 11200                    |                                    |                                    |                                    |
| 3+4-METHYLPHENOLS                                         |                        |                          |                                    |                                    |                                    |
| 4-Chloroaniline                                           | 250000                 | 48000                    |                                    |                                    |                                    |
| Acetophenone                                              |                        | 98                       |                                    |                                    |                                    |
| Benzo(a)anthracene                                        | 2100                   | 620                      |                                    |                                    |                                    |
| Benzo(a)pyrene                                            | 210                    | 62                       |                                    |                                    |                                    |
| Benzo(b)fluoranthene                                      | 2100                   | 620                      |                                    |                                    |                                    |
| Benzo(g,h,i)perylene                                      |                        |                          |                                    |                                    |                                    |
| Benzo(k)fluoranthene                                      | 21000                  | 6200                     |                                    |                                    |                                    |
| BENZOIC ACID                                              | 100000000              | 48000000                 |                                    |                                    |                                    |
| bis(2-Ethylhexyl)phthalate                                | 120000                 | 35000                    |                                    |                                    |                                    |
| BUTANOIC ACID, BUTYL ESTER                                |                        |                          |                                    |                                    |                                    |
| Butylbenzylphthalate                                      | 100000000              | 2400000                  |                                    |                                    |                                    |
| Carbazole                                                 | 86000                  |                          |                                    |                                    |                                    |
| CHOLESTEROL                                               |                        |                          |                                    |                                    |                                    |
| Chrysene                                                  | 210000                 | 62000                    |                                    |                                    |                                    |
| Dibenz(a,h)anthracene                                     | 210                    | 62                       |                                    |                                    |                                    |
| Di-n-octylphthalate                                       | 2500000                | 480000                   |                                    |                                    |                                    |
| ETHANOL, 1-(2-BUTOXYETHOXY)-                              |                        |                          |                                    |                                    |                                    |
| ETHANOL, 2-(2-BUTOXYETHOXY)-                              |                        |                          |                                    |                                    |                                    |
| Fluoranthene                                              | 2200000                | 460000                   |                                    |                                    |                                    |
| Fluorene                                                  | 2600000                | 540000                   |                                    |                                    |                                    |
| HEXADECANOIC ACID                                         |                        |                          |                                    |                                    |                                    |
| Indeno(1,2,3-cd)pyrene                                    | 2100                   | 620                      |                                    |                                    |                                    |
| Naphthalene                                               | 19000                  | 11200                    |                                    |                                    |                                    |
| NAPHTHALENE, 1,2,3,4,4A,5,6,8A-OCTAHYDRO-4A,8-DIMETHYL-2- |                        |                          |                                    |                                    |                                    |
| OCTABENZONE                                               |                        |                          |                                    |                                    |                                    |
| OCTADECANOIC ACID                                         |                        |                          |                                    |                                    |                                    |
| Phenanthrene                                              |                        |                          |                                    |                                    |                                    |
| Phenol                                                    | 100000000              | 3600000                  |                                    |                                    |                                    |
| PHENOL, 4-(1,1,3,3-TETRAMETHYL BUTYL)-                    |                        |                          |                                    |                                    |                                    |
| PROPANOIC ACID, 2METHYL-, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL |                        |                          |                                    |                                    |                                    |
| Pyrene                                                    | 2900000                | 460000                   |                                    |                                    |                                    |
| TETRADECANOIC ACID                                        |                        |                          |                                    |                                    |                                    |
| <b>Pesticides/PCBs (ug/kg)</b>                            |                        |                          |                                    |                                    |                                    |
| 4,4'-DDE                                                  | 7000                   | 1700                     |                                    |                                    |                                    |
| 4,4'-DDT                                                  | 7000                   | 1700                     |                                    |                                    |                                    |
| alpha-BHC                                                 | 360                    | 92                       |                                    |                                    |                                    |
| alpha-Chlordane                                           |                        |                          |                                    |                                    |                                    |
| beta-BHC                                                  | 1300                   | 320                      |                                    |                                    |                                    |
| Endosulfan sulfate                                        |                        |                          |                                    |                                    |                                    |
| gamma-Chlordane                                           |                        |                          |                                    |                                    |                                    |

Table 5-7  
 Subsurface Soil Analytical Results  
 Sigmon's Septic Tank Site  
 Statesville, Iredell County, North Carolina

|                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H19<br>Feb-05<br>2-4' bls | SS-SF/SB-J05<br>Feb-05<br>2-4' bls | SS-SF/SB-J25<br>Feb-05<br>2-4' bls |
|--------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|
| Heptachlor epoxide | 190                    | 53                       |                                    |                                    |                                    |

Table 5-7  
Subsurface Soil Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                           | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H19<br>Feb-05<br>2-4' bis | SS-SF/SB-J05<br>Feb-05<br>2-4' bis | SS-SF/SB-J25<br>Feb-05<br>2-4' bis |
|-------------------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Volatile Organic Compounds (ug/kg)</b> |                        |                          |                                    |                                    |                                    |
| 1,1-Dichloroethane                        | 170000                 | 102000                   |                                    |                                    |                                    |
| 1,2,4-Trichlorobenzene                    | 22000                  | 12400                    |                                    |                                    |                                    |
| 1,2,4-TRIMETHYLBENZENE                    | 17000                  |                          |                                    |                                    |                                    |
| 1,2-Dichlorobenzene                       | 600000                 | 220000                   |                                    |                                    |                                    |
| 1,3-Dichlorobenzene                       | 600000                 | 106000                   |                                    |                                    |                                    |
| 1,4-Dichlorobenzene                       | 7900                   | 3400                     |                                    |                                    |                                    |
| 1-HEXACOSANOL                             |                        |                          |                                    |                                    |                                    |
| 2-Butanone                                | 11000000               | 4400000                  |                                    |                                    |                                    |
| 2-Hexanone                                |                        |                          |                                    |                                    |                                    |
| Acetone                                   | 5400000                | 2800000                  |                                    |                                    |                                    |
| Benzene                                   | 1400                   | 640                      |                                    |                                    |                                    |
| BENZENE, 1,2,3-TRIMETHYL-                 |                        |                          |                                    |                                    |                                    |
| BENZENE, 1-ETHYL-2,3-DIMETHYL-            |                        |                          |                                    |                                    |                                    |
| BENZENE, 1-METHYL-4-(1-METHYLETHYL)-      |                        |                          |                                    |                                    |                                    |
| BENZENE, 4-ETHYL-1,2-DIMETHYL-            |                        |                          |                                    |                                    |                                    |
| CAMPHOR                                   |                        |                          |                                    |                                    |                                    |
| Carbon Disulfide                          | 720000                 | 72000                    |                                    |                                    |                                    |
| Chlorobenzene                             | 53000                  | 30000                    |                                    |                                    |                                    |
| cis-1,2-Dichloroethene                    | 15000                  | 8600                     |                                    |                                    |                                    |
| Cyclohexane                               | 140000                 |                          |                                    |                                    |                                    |
| Ethylbenzene                              | 400000                 | 380000                   |                                    |                                    |                                    |
| Isopropylbenzene                          | 200000                 | 114000                   |                                    |                                    |                                    |
| Methyl Acetate                            | 9200000                |                          |                                    |                                    |                                    |
| Methylcyclohexane                         | 870000                 |                          |                                    |                                    |                                    |
| Tetrachloroethene                         | 1300                   | 480                      |                                    |                                    |                                    |
| TETRAMETHYL BENZENE (2 ISOMERS)           |                        |                          |                                    |                                    |                                    |
| Toluene                                   | 520000                 | 132000                   |                                    |                                    |                                    |
| Trichloroethene                           | 110                    | 53                       |                                    |                                    |                                    |
| Trichlorofluoromethane                    | 200000                 | 78000                    |                                    |                                    |                                    |
| Xylenes (total)                           | 420000                 | 54000                    |                                    |                                    |                                    |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-A02<br>Feb-05<br>0" bls | SS-SF/SB-A02<br>Feb-05<br>6" bls | SS-SF/SB-B03<br>Feb-05<br>0" bls | SS-SF/SB-B03<br>Feb-05<br>6" bls | SS-SF/SB-A04<br>Feb-05<br>0" bls | SS-SF/SB-A04<br>Feb-05<br>6" bls | SS-SF/SB-B05<br>Feb-05<br>0" bls | SS-SF/SB-B05<br>Feb-05<br>6" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 4.48 U                           | 5.53 U                           | 5.1 U                            | 5.08 U                           | 4.76 U                           | 5.81 U                           | 5.53 U                           | 5.98 U                           |
| Chromium                           | 30                     | 30                       | 85.72 U                          | 96.54 U                          | 94.77 U                          | 101.03 U                         | 83.34 U                          | 119.84 U                         | 117.38 U                         | 148.26 U                         |
| Iron                               | 2300                   |                          | 3103.93                          | 2533.53                          | 8083.57                          | 7968.59                          | 5625.66                          | 11652.63                         | 21941.04                         | 39924.39                         |
| Lead                               | 400                    | 400                      | 6.81 U                           | 8.39 U                           | 12.68                            | 7.91 U                           | 14.3                             | 9.24 U                           | 17.25                            | 13.11                            |
| Manganese                          | 180                    | 360                      | 86.61                            | 51.08 U                          | 64.14                            | 53.21 U                          | 353.25                           | 70.97 U                          | 170.51                           | 173.52                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-A06<br>Feb-05<br>0" bls | SS-SF/SB-A06<br>Feb-05<br>6" bls | SS-SF/SB-A08<br>Feb-05<br>0" bls | SS-SF/SB-A08<br>Feb-05<br>6" bls | SS-SF/SB-A10<br>Feb-05<br>0" bls | SS-SF/SB-A10<br>Feb-05<br>6" bls | SS-SF/SB-A24<br>Feb-05<br>0" bls | SS-SF/SB-A24<br>Feb-05<br>6" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ((ppm))</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 4.02 U                           | 5.58 U                           | 6.78 U                           | 5.22 U                           | 4.67 U                           | 20.32                            | 6.19 U                           | 8.32 U                           |
| Chromium                           | 30                     | 30                       | 77.39 U                          | 96.95 U                          | 119.07 U                         | 84.23 U                          | 87 U                             | 67.71 U                          | 153.02 U                         | 229.11 U                         |
| Iron                               | 2300                   |                          | 4500.03                          | 7903.47                          | 5347.52                          | 5163.74                          | 3357.62                          | 4022.72                          | 43992.84                         | 40847.4                          |
| Lead                               | 400                    | 400                      | 6.29 U                           | 22.11                            | 11.98                            | 21.13                            | 8.44                             | 31.11                            | 15.71                            | 12.64 U                          |
| Manganese                          | 180                    | 360                      | 171.64                           | 96.13                            | 80.15                            | 97.21                            | 402.79                           | 300.99                           | 92.92 U                          | 131.39 U                         |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-B01<br>Feb-05<br>0" bls | SS-SF/SB-B01<br>Feb-05<br>6" bls | SS-SF/SB-B07<br>Feb-05<br>0" bls | SS-SF/SB-B07<br>Feb-05<br>6" bls | SS-SF/SB-B09<br>Feb-05<br>0" bls | SS-SF/SB-B09<br>Feb-05<br>6" bls | SS-SF/SB-B11<br>Feb-05<br>0" bls | SS-SF/SB-B11<br>Feb-05<br>6" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 4.06 U                           | 7.05 U                           | 5.15 U                           | 5.68 U                           | 4.82 U                           | 6.06 U                           | 4.52 U                           | 5.58 U                           |
| Chromium                           | 30                     | 30                       | 63.86 U                          | 113.6 U                          | 84.34 U                          | 101.26 U                         | 85.02 U                          | 85.5 U                           | 91.07 U                          | 97.5 U                           |
| Iron                               | 2300                   |                          | 2842.82                          | 11217.29                         | 5737.09                          | 9916.34                          | 5025.42                          | 7553.42                          | 2399.62                          | 5635.51                          |
| Lead                               | 400                    | 400                      | 14.38                            | 34.14                            | 19.86                            | 16.64                            | 12.9                             | 41.27                            | 6.97 U                           | 13.41                            |
| Manganese                          | 180                    | 360                      | 151.09                           | 106.04                           | 50.17 U                          | 108.92                           | 144.44                           | 45.84 U                          | 99.23                            | 94.28                            |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-B13<br>Feb-05<br>0" bls | SS-SF/SB-B13<br>Feb-05<br>6" bls | SS-SF/SB-B25<br>Feb-05<br>0" bls | SS-SF/SB-B25<br>Feb-05<br>6" bls | SS-SF/SB-C02<br>Feb-05<br>0" bls | SS-SF/SB-C02<br>Feb-05<br>6" bls | SS-SF/SB-C04<br>Feb-05<br>6" bls | SS-SF/SB-C06<br>Feb-05<br>0" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 6.07 U                           | 6.7 U                            | 5.03 U                           | 9.68 U                           | 5.11 U                           | 5.62 U                           | 5.48 U                           | 4.27 U                           |
| Chromium                          | 30                     | 30                       | 105.75 U                         | 115.37 U                         | 118.13 U                         | 291.08 U                         | 104.09 U                         | 125.44 U                         | 112.35 U                         | 83.02 U                          |
| Iron                              | 2300                   |                          | 6966.48                          | 4546.75                          | 27611.61                         | 49347.73                         | 14101.46                         | 14210.55                         | 6896.73                          | 2576.55                          |
| Lead                              | 400                    | 400                      | 23.87                            | 19.06                            | 9.6                              | 14.85 U                          | 14.25                            | 8.72 U                           | 8.43 U                           | 7.98                             |
| Manganese                         | 180                    | 360                      | 66.3                             | 61.51 U                          | 70.97 U                          | 163.27 U                         | 60.11 U                          | 68.25 U                          | 61.02 U                          | 159.98                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C06<br>Feb-05<br>6" bls | SS-SF/SB-C08<br>Feb-05<br>0" bls | SS-SF/SB-C08<br>Feb-05<br>6" bls | SS-SF/SB-C10<br>Feb-05<br>0" bls | SS-SF/SB-C10<br>Feb-05<br>6" bls | SS-SF/SB-C12<br>Feb-05<br>0" bls | SS-SF/SB-C12<br>Feb-05<br>6" bls | SS-SF/SB-C14<br>Feb-05<br>0" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 5.02 U                           | 5.47 U                           | 6.26 U                           | 3.74 U                           | 6.41 U                           | 5.91 U                           | 6.41                             | 4.52 U                           |
| Chromium                          | 30                     | 30                       | 104.23 U                         | 95.46 U                          | 150.01 U                         | 71.26 U                          | 129.13 U                         | 103.07 U                         | 113.17 U                         | 82.86 U                          |
| Iron                              | 2300                   |                          | 4580.33                          | 10983.11                         | 18574.41                         | 2946.62                          | 7319.41                          | 9482.04                          | 14474.19                         | 6733.64                          |
| Lead                              | 400                    | 400                      | 7.61 U                           | 17.56                            | 18.29                            | 5.97 U                           | 10.15 U                          | 23.07                            | 16.02                            | 11.56                            |
| Manganese                         | 180                    | 360                      | 55.49 U                          | 117.26                           | 76.69 U                          | 118.5                            | 68.11 U                          | 278.39                           | 146.92                           | 164.45                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C14<br>Feb-05<br>6" bls | SS-SF/SB-C16<br>Feb-05<br>0" bls | SS-SF/SB-C16<br>Feb-05<br>6" bls | SS-SF/SB-C18<br>Feb-05<br>0" bls | SS-SF/SB-C18<br>Feb-05<br>6" bls | SS-SF/SB-C20<br>Feb-05<br>0" bls | SS-SF/SB-C20<br>Feb-05<br>6" bls | SS-SF/SB-C22<br>Feb-05<br>0" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 6.37 U                           | 4.5 U                            | 6.49 U                           | 4.55 U                           | 5.46 U                           | 4.76 U                           | 6.81 U                           | 4.04 U                           |
| Chromium                          | 30                     | 30                       | 127.6 U                          | 82.89 U                          | 132.88 U                         | 82.31 U                          | 103.68 U                         | 102.55 U                         | 168.54 U                         | 83.35 U                          |
| Iron                              | 2300                   |                          | 10737.85                         | 6692.65                          | 11427                            | 4151.54                          | 7044.61                          | 14831.44                         | 36094.58                         | 11103.03                         |
| Lead                              | 400                    | 400                      | 9.65 U                           | 10.34                            | 10.11 U                          | 10.36                            | 8.21 U                           | 7.21 U                           | 10.36 U                          | 6.4 U                            |
| Manganese                         | 180                    | 360                      | 73.56 U                          | 133.78                           | 76.3 U                           | 172.76                           | 107.24                           | 168.03                           | 103.21 U                         | 79.21                            |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-C22<br>Feb-05<br>6" bls | SS-SF/SB-C24<br>Feb-05<br>0" bls | SS-SF/SB-C24<br>Feb-05<br>6" bls | SS-SF/SB-D01<br>Feb-05<br>0" bls | SS-SF/SB-D01<br>Feb-05<br>6" bls | SS-SF/SB-D03<br>Feb-05<br>0" bls | SS-SF/SB-D03<br>Feb-05<br>6" bls | SS-SF/SB-D05<br>Feb-05<br>0" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 5.26 U                           | 5.31                             | 6.7 U                            | 3.67 U                           | 6.14 U                           | 4.08 U                           | 5.62 U                           | 4.68 U                           |
| Chromium                           | 30                     | 30                       | 121.33 U                         | 130.44 U                         | 188.26 U                         | 64.67 U                          | 105.6 U                          | 75.26 U                          | 111.95 U                         | 83.03 U                          |
| Iron                               | 2300                   |                          | 16399.99                         | 27154.42                         | 38395.48                         | 2216.39                          | 8626.97                          | 7488.51                          | 12922.35                         | 4842.59                          |
| Lead                               | 400                    | 400                      | 8.45 U                           | 7.69 U                           | 10.52 U                          | 9.08                             | 18                               | 9                                | 10.79                            | 7.27                             |
| Manganese                          | 180                    | 360                      | 72.1 U                           | 98.23                            | 106.88 U                         | 63.35                            | 59.47 U                          | 354.93                           | 66.21 U                          | 85.94                            |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D07<br>Feb-05<br>0" bls | SS-SF/SB-D07<br>Feb-05<br>6" bls | SS-SF/SB-D09<br>Feb-05<br>0" bls | SS-SF/SB-D09<br>Feb-05<br>6" bls | SS-SF/SB-D11<br>Feb-05<br>0" bls | SS-SF/SB-D11<br>Feb-05<br>6" bls | SS-SF/SB-D13<br>Feb-05<br>0" bls | SS-SF/SB-D13<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 4.39 U                           | 7.15 U                           | 5.26 U                           | 6.41 U                           | 3.63 U                           | 8.23 U                           | 6.34 U                           | 8.99 U                           |
| Chromium                          | 30                     | 30                       | 82.14 U                          | 149.38 U                         | 90.94 U                          | 132.23 U                         | 69.27 U                          | 146.68 U                         | 97.65 U                          | 244.15 U                         |
| Iron                              | 2300                   |                          | 4905.8                           | 8375.49                          | 7156.23                          | 7150.93                          | 4592.43                          | 14922.36                         | 9712.11                          | 11503.14                         |
| Lead                              | 400                    | 400                      | 7.98                             | 11.67 U                          | 17.46                            | 9.76 U                           | 5.71 U                           | 33.43                            | 40.57                            | 14.12 U                          |
| Manganese                         | 180                    | 360                      | 51.5                             | 74.45 U                          | 140.06                           | 75.67 U                          | 53.49                            | 81.73 U                          | 55.22 U                          | 113.34 U                         |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D15<br>Feb-05<br>0" bls | SS-SF/SB-D15<br>Feb-05<br>6" bls | SS-SF/SB-D17<br>Feb-05<br>0" bls | SS-SF/SB-D17<br>Feb-05<br>6" bls | SS-SF/SB-D19<br>Feb-05<br>0" bls | SS-SF/SB-D19<br>Feb-05<br>6" bls | SS-SF/SB-D21<br>Feb-05<br>0" bls | SS-SF/SB-D21<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 4.45 U                           | 5.73 U                           | 5.2 U                            | 8.43 U                           | 5.61 U                           | 8.5 U                            | 5.86 U                           | 8.01 U                           |
| Chromium                          | 30                     | 30                       | 77.63 U                          | 113.56 U                         | 109.21 U                         | 210.55 U                         | 102.35                           | 159.92 U                         | 131.89 U                         | 181.14 U                         |
| Iron                              | 2300                   |                          | 8822.74                          | 15105.17                         | 12231.6                          | 22063.89                         | 4560.34                          | 6209.43                          | 31043.28                         | 27059.49                         |
| Lead                              | 400                    | 400                      | 12.23                            | 8.96                             | 10.37                            | 13.48 U                          | 32.37                            | 13.39 U                          | 17.87                            | 12.23 U                          |
| Manganese                         | 180                    | 360                      | 106.85                           | 68.51 U                          | 144.06                           | 194.4                            | 290.92                           | 94.15 U                          | 424.39                           | 452.76                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-D23<br>Feb-05<br>0" bls | SS-SF/SB-D23<br>Feb-05<br>6" bls | SS-SF/SB-D25<br>Feb-05<br>0" bls | SS-SF/SB-D25<br>Feb-05<br>6" bls | SS-SF/SB-E02<br>Feb-05<br>0" bls | SS-SF/SB-E02<br>Feb-05<br>6" bls | SS-SF/SB-E04<br>Feb-05<br>0" bls | SS-SF/SB-E04<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 4.86 U                           | 5.27 U                           | 4.85 U                           | 5.3 U                            | 3.24 U                           | 6.17 U                           | 5.38 U                           | 5.16 U                           |
| Chromium                          | 30                     | 30                       | 98.4 U                           | 114.21 U                         | 105.08 U                         | 116.67 U                         | 58.4 U                           | 112.74 U                         | 120.52 U                         | 120.97 U                         |
| Iron                              | 2300                   |                          | 14993.29                         | 19786.98                         | 15876.3                          | 17285.83                         | 961.48                           | 4908.41                          | 17593.12                         | 17541.85                         |
| Lead                              | 400                    | 400                      | 14.99                            | 14.66                            | 7.39 U                           | 8.37 U                           | 5.23 U                           | 14.05                            | 9.69                             | 7.66 U                           |
| Manganese                         | 180                    | 360                      | 290.58                           | 177.2                            | 107.95                           | 62.41 U                          | 73.65                            | 52.63 U                          | 210.19                           | 127.3                            |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E06<br>Feb-05<br>0" bls | SS-SF/SB-E06<br>Feb-05<br>6" bls | SS-SF/SB-E08<br>Feb-05<br>0" bls | SS-SF/SB-E08<br>Feb-05<br>6" bls | SS-SF/SB-E10<br>Feb-05<br>0" bls | SS-SF/SB-E10<br>Feb-05<br>6" bls | SS-SF/SB-E12<br>Feb-05<br>0" bls | SS-SF/SB-E12<br>Feb-05<br>6" bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                          | 0.39                   | 4.4                      | 6.11                             | 5.35 U                           | 5.62 U                           | 13.13 U                          | 5.15 U                           | 6.24 U                           | 5.56 U                           | 5.76 U                           |
| Chromium                         | 30                     | 30                       | 91.08 U                          | 105.31 U                         | 119.48 U                         | 287.26 U                         | 94.21 U                          | 122.93 U                         | 100.85 U                         | 93.79 U                          |
| Iron                             | 2300                   |                          | 5775.87                          | 6283.52                          | 16292.07                         | 12974.67                         | 8752.18                          | 7092.47                          | 8431.73                          | 8121.08                          |
| Lead                             | 400                    | 400                      | 15.55                            | 8.24 U                           | 11.04                            | 20.26 U                          | 18.09                            | 13.61                            | 23.83                            | 27.38                            |
| Manganese                        | 180                    | 360                      | 61.83                            | 53.76 U                          | 95.89                            | 157.43 U                         | 186.42                           | 66.46 U                          | 52.32 U                          | 51.3 U                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E14<br>Feb-05<br>0" bls | SS-SF/SB-E14<br>Feb-05<br>6" bls | SS-SF/SB-E16<br>Feb-05<br>0" bls | SS-SF/SB-E16<br>Feb-05<br>6" bls | SS-SF/SB-E18<br>Feb-05<br>0" bls | SS-SF/SB-E18<br>Feb-05<br>6" bls | SS-SF/SB-E20<br>Feb-05<br>0" bls | SS-SF/SB-E20<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 5.69 U                           | 5.81 U                           | 5.52 U                           | 7.84 U                           | 4.75                             | 6.63 U                           | 4.52 U                           | 4.18 U                           |
| Chromium                          | 30                     | 30                       | 96 U                             | 107.04 U                         | 103.01 U                         | 166.61 U                         | 99.13 U                          | 152.69 U                         | 95.14 U                          | 81.27 U                          |
| Iron                              | 2300                   |                          | 9832.46                          | 12307.43                         | 10946.77                         | 6423.05                          | 13139.13                         | 15460.34                         | 4651.24                          | 5028.71                          |
| Lead                              | 400                    | 400                      | 28.51                            | 25.42                            | 21.04                            | 12.5 U                           | 7.03 U                           | 10.25 U                          | 7.3 U                            | 7.13                             |
| Manganese                         | 180                    | 360                      | 98.33                            | 60.25 U                          | 103.14                           | 88.23 U                          | 196.61                           | 87.58 U                          | 102.96                           | 202.18                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E22<br>Feb-05<br>0" bls | SS-SF/SB-E22<br>Feb-05<br>6" bls | SS-SF/SB-E24<br>Feb-05<br>0" bls | SS-SF/SB-E24<br>Feb-05<br>6" bls | SS-SF/SB-F01<br>Feb-05<br>0" bls | SS-SF/SB-F01<br>Feb-05<br>6" bls | SS-SF/SB-F03<br>Feb-05<br>0" bls | SS-SF/SB-F03<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 6.02 U                           | 4.21 U                           | 4.51 U                           | 5.73 U                           | 3.82 U                           | 8.17 U                           | 3.31 U                           | 5.37 U                           |
| Chromium                          | 30                     | 30                       | 121.04 U                         | 91.04 U                          | 87.19 U                          | 139.34 U                         | 71.71 U                          | 180.12 U                         | 58.16 U                          | 100.27 U                         |
| Iron                              | 2300                   |                          | 14920.02                         | 8055.43                          | 7654.67                          | 19084.76                         | 1817.87                          | 5242.75                          | 600.71                           | 4134.59                          |
| Lead                              | 400                    | 400                      | 18.6                             | 6.79 U                           | 8.69                             | 8.61 U                           | 6.02 U                           | 13.01 U                          | 5.47 U                           | 8.27 U                           |
| Manganese                         | 180                    | 360                      | 273.07                           | 54.99 U                          | 182.27                           | 80.38 U                          | 34.27 U                          | 79.73 U                          | 35.35 U                          | 52.93 U                          |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F05<br>Feb-05<br>0" bls | SS-SF/SB-F05<br>Feb-05<br>6" bls | SS-SF/SB-F07<br>Feb-05<br>0" bls | SS-SF/SB-F07<br>Feb-05<br>6" bls | SS-SF/SB-F09<br>Feb-05<br>0" bls | SS-SF/SB-F09<br>Feb-05<br>6" bls | SS-SF/SB-F11<br>Feb-05<br>0" bls | SS-SF/SB-F11<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 6.04 U                           | 5.46 U                           | 5.26 U                           | 13.53 U                          | 7.45 U                           | 4.98 U                           | 5.66 U                           | 5.9 U                            |
| Chromium                          | 30                     | 30                       | 143.64 U                         | 137.62                           | 119.17 U                         | 310.79 U                         | 163.61 U                         | 110.41 U                         | 114.74 U                         | 125.9 U                          |
| Iron                              | 2300                   |                          | 30284.04                         | 23668.29                         | 18391.95                         | 14193.68                         | 22739                            | 13172.4                          | 17576.09                         | 23432.19                         |
| Lead                              | 400                    | 400                      | 9.21 U                           | 10.21                            | 10.43                            | 20.7 U                           | 11.47 U                          | 7.85 U                           | 13.12                            | 16.54                            |
| Manganese                         | 180                    | 360                      | 88.69 U                          | 122.22                           | 552                              | 167.07 U                         | 130.1                            | 188.02                           | 87.76                            | 81                               |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F13<br>Feb-05<br>0" bls | SS-SF/SB-F13<br>Feb-05<br>6" bls | SS-SF/SB-F15<br>Feb-05<br>0" bls | SS-SF/SB-F15<br>Feb-05<br>6" bls | SS-SF/SB-F17<br>Feb-05<br>0" bls | SS-SF/SB-F17<br>Feb-05<br>6" bls | SS-SF/SB-F19<br>Feb-05<br>0" bls | SS-SF/SB-F19<br>Feb-05<br>6" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 6.2 U                            | 5.72 U                           | 5.28 U                           | 2.91 U                           | 5.28 U                           | 5.9 U                            | 4.93 U                           | 5.95 U                           |
| Chromium                           | 30                     | 30                       | 103.72 U                         | 93.87 U                          | 96.98 U                          | 53.79 U                          | 113.41 U                         | 123.33 U                         | 101.24 U                         | 137.48 U                         |
| Iron                               | 2300                   |                          | 11177.98                         | 9460.42                          | 7016.93                          | 134.98                           | 12174                            | 17749.27                         | 15136.12                         | 17094.54                         |
| Lead                               | 400                    | 400                      | 36.77                            | 26.33                            | 18.72                            | 4.82 U                           | 7.99 U                           | 8.95 U                           | 7.45 U                           | 9.44 U                           |
| Manganese                          | 180                    | 360                      | 91.69                            | 63.15                            | 56.92                            | 27.35 U                          | 107.97                           | 107.86                           | 176.99                           | 213.83                           |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-F21<br>Feb-05<br>0" bls | SS-SF/SB-F21<br>Feb-05<br>6" bls | SS-SF/SB-F23<br>Feb-05<br>0" bls | SS-SF/SB-F23<br>Feb-05<br>6" bls | SS-SF/SB-F25<br>Feb-05<br>0" bls | SS-SF/SB-F25<br>Feb-05<br>6" bls | SS-SF/SB-G02<br>Feb-05<br>0" bls | SS-SF/SB-G02<br>Feb-05<br>6" bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                          | 0.39                   | 4.4                      | 5.54 U                           | 5.87 U                           | 7.6 U                            | 14.72 U                          | 5.12 U                           | 8.3 U                            | 4.05 U                           | 5.24 U                           |
| Chromium                         | 30                     | 30                       | 102.03 U                         | 123.67 U                         | 106.38 U                         | 216.86 U                         | 118.73 U                         | 185.33 U                         | 71.71 U                          | 103.22 U                         |
| Iron                             | 2300                   |                          | 13101.8                          | 12050.66                         | 14483.07                         | 15050.92                         | 24390.27                         | 16952.76                         | 7208.89                          | 17293.89                         |
| Lead                             | 400                    | 400                      | 15.38                            | 8.95 U                           | 73.79                            | 77.81                            | 7.65 U                           | 13.25 U                          | 12.9                             | 13.42                            |
| Manganese                        | 180                    | 360                      | 125.51                           | 96.85                            | 218.58                           | 128.07 U                         | 211.28                           | 105.9 U                          | 42.72 U                          | 83.73                            |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G04<br>Feb-05<br>0" bls | SS-SF/SB-G04<br>Feb-05<br>6" bls | SS-SF/SB-G06<br>Feb-05<br>0" bls | SS-SF/SB-G06<br>Feb-05<br>6" bls | SS-SF/SB-G08<br>Feb-05<br>0" bls | SS-SF/SB-G08<br>Feb-05<br>6" bls | SS-SF/SB-G10<br>Feb-05<br>0" bls | SS-SF/SB-G10<br>Feb-05<br>6" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 9.6                              | 7.16 U                           | 5.52 U                           | 6.25 U                           | 10.46 U                          | 7.02 U                           | 5.51 U                           | 6.19 U                           |
| Chromium                           | 30                     | 30                       | 138.38 U                         | 163.25 U                         | 119.67 U                         | 201.53                           | 114.3 U                          | 142.88 U                         | 75.42 U                          | 118.35 U                         |
| Iron                               | 2300                   |                          | 24947.21                         | 23555.55                         | 20247.46                         | 24891.02                         | 17906.78                         | 14817.47                         | 5137.82                          | 14761.76                         |
| Lead                               | 400                    | 400                      | 16.21                            | 10.81 U                          | 12.43                            | 19                               | 148.43                           | 10.29 U                          | 39.62                            | 17.03                            |
| Manganese                          | 180                    | 360                      | 281.53                           | 135.24                           | 166.34                           | 98.03                            | 155.51                           | 81.9 U                           | 43.7 U                           | 73.69                            |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                    | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G12<br>Feb-05<br>0" bls | SS-SF/SB-G12<br>Feb-05<br>6" bls | SS-SF/SB-G14<br>Feb-05<br>0" bls | SS-SF/SB-G14<br>Feb-05<br>6" bls | SS-SF/SB-G16<br>Feb-05<br>0" bls | SS-SF/SB-G16<br>Feb-05<br>6" bls | SS-SF/SB-G18<br>Feb-05<br>0" bls | SS-SF/SB-G18<br>Feb-05<br>6" bls |
|------------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                            | 0.39                   | 4.4                      | 5.45 U                           | 5.35 U                           | 5.61 U                           | 5.48 U                           | 4.84 U                           | 8.77 U                           | 5.09 U                           | 18.55 U                          |
| Chromium                           | 30                     | 30                       | 114.73 U                         | 121.24 U                         | 96.87 U                          | 98.53 U                          | 92.82 U                          | 251.62 U                         | 107.06 U                         | 512.8 U                          |
| Iron                               | 2300                   |                          | 19893.51                         | 18440.14                         | 8348.92                          | 10579.47                         | 9002.63                          | 44813.86                         | 14111.58                         | 11297.01                         |
| Lead                               | 400                    | 400                      | 8.25                             | 8.26 U                           | 24.15                            | 21.36                            | 9.38                             | 13.24 U                          | 7.75                             | 31.42 U                          |
| Manganese                          | 180                    | 360                      | 130.04                           | 67.92 U                          | 71.33                            | 65.3                             | 79.1                             | 257.51                           | 225.45                           | 258.42 U                         |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G20<br>Feb-05<br>0" bls | SS-SF/SB-G20<br>Feb-05<br>6" bls | SS-SF/SB-G22<br>Feb-05<br>0" bls | SS-SF/SB-G22<br>Feb-05<br>6" bls | SS-SF/SB-G24<br>Feb-05<br>0" bls | SS-SF/SB-G24<br>Feb-05<br>6" bls | SS-SF/SB-H01<br>Feb-05<br>0" bls | SS-SF/SB-H01<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 5.05 U                           | 5.19 U                           | 5.8 U                            | 7.88 U                           | 5.78 U                           | 6.41 U                           | 5.12 U                           | 5.17 U                           |
| Chromium                          | 30                     | 30                       | 124.06                           | 103.8 U                          | 116.42 U                         | 197.59 U                         | 80.29 U                          | 142.07 U                         | 82.39 U                          | 88.22 U                          |
| Iron                              | 2300                   |                          | 10159.46                         | 12345.76                         | 23168.82                         | 31899.43                         | 6444.61                          | 8367.39                          | 2002.96                          | 2453.35                          |
| Lead                              | 400                    | 400                      | 13.55                            | 12.57                            | 17.36                            | 11.95 U                          | 42.36                            | 10.05 U                          | 17.42                            | 14.19                            |
| Manganese                         | 180                    | 360                      | 100.27                           | 126.28                           | 126.12                           | 110.75 U                         | 154.32                           | 72.6 U                           | 51.83                            | 45.33 U                          |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H03<br>Feb-05<br>0" bls | SS-SF/SB-H03<br>Feb-05<br>6" bls | SS-SF/SB-H05<br>Feb-05<br>0" bls | SS-SF/SB-H05<br>Feb-05<br>6" bls | SS-SF/SB-H07<br>Feb-05<br>0" bls | SS-SF/SB-H07<br>Feb-05<br>6" bls | SS-SF/SB-H09<br>Feb-05<br>0" bls | SS-SF/SB-H09<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 5.26 U                           | 7.91 U                           | 4.74 U                           | 5.78 U                           | 5.73 U                           | 14.3 U                           | 6.68 U                           | 8.78 U                           |
| Chromium                          | 30                     | 30                       | 192.49 U                         | 169.25 U                         | 91.55 U                          | 115.24 U                         | 108.15 U                         | 400.58 U                         | 108.31 U                         | 146.53 U                         |
| Iron                              | 2300                   |                          | 11310.36 U                       | 17722.73 U                       | 8750.93 U                        | 15516.01 U                       | 11655.31 U                       | 6622.11 U                        | 16293.13 U                       | 21411.02 U                       |
| Lead                              | 400                    | 400                      | 7.95 U                           | 12.54 U                          | 12.93 U                          | 18.29 U                          | 21.96 U                          | 23.51 U                          | 41.11 U                          | 51.63 U                          |
| Manganese                         | 180                    | 360                      | 64.89 U                          | 95.01 U                          | 221.23 U                         | 136.5 U                          | 116.61 U                         | 188.88 U                         | 358.02 U                         | 231.38 U                         |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H11<br>Feb-05<br>0" bls | SS-SF/SB-H11<br>Feb-05<br>6" bls | SS-SF/SB-H13<br>Feb-05<br>0" bls | SS-SF/SB-H13<br>Feb-05<br>6" bls | SS-SF/SB-H15<br>Feb-05<br>0" bls | SS-SF/SB-H15<br>Feb-05<br>6" bls | SS-SF/SB-H17<br>Feb-05<br>0" bls | SS-SF/SB-H17<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 6.42 U                           | 6.12 U                           | 5.61 U                           | 6.51 U                           | 5.5 U                            | 6.98 U                           | 5.34 U                           | 9.24 U                           |
| Chromium                          | 30                     | 30                       | 123.62 U                         | 130.69 U                         | 99.84 U                          | 118.57 U                         | 117.8 U                          | 162.01 U                         | 116.12 U                         | 217.33 U                         |
| Iron                              | 2300                   |                          | 14397.42                         | 10465.84                         | 7288.58                          | 9338.51                          | 13121.46                         | 14843.13                         | 19257.36                         | 18786.58                         |
| Lead                              | 400                    | 400                      | 29.21                            | 9.4 U                            | 20.09                            | 20.06                            | 14.5                             | 11.39 U                          | 9.63                             | 14.78 U                          |
| Manganese                         | 180                    | 360                      | 243.7                            | 75 U                             | 121.99                           | 63.45 U                          | 132.87                           | 85.26 U                          | 69.64 U                          | 118.48 U                         |

Table 5-8  
Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H19<br>Feb-05<br>0" bls | SS-SF/SB-H19<br>Feb-05<br>6" bls | SS-SF/SB-H21<br>Feb-05<br>0" bls | SS-SF/SB-H21<br>Feb-05<br>6" bls | SS-SF/SB-H23<br>Feb-05<br>0" bls | SS-SF/SB-H23<br>Feb-05<br>6" bls | SS-SF/SB-H25<br>Feb-05<br>0" bls | SS-SF/SB-H25<br>Feb-05<br>6" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 5.51 U                           | 6.28 U                           | 5.61 U                           | 7.27 U                           | 6.43 U                           | 7.21 U                           | 4.43 U                           | 5.87 U                           |
| Chromium                          | 30                     | 30                       | 99.88 U                          | 112.85 U                         | 109.63 U                         | 171.3 U                          | 103.8 U                          | 145 U                            | 84.39 U                          | 128.01 U                         |
| Iron                              | 2300                   |                          | 11625.18                         | 13524.02                         | 16206.19                         | 20476.9                          | 17928.7                          | 29694.32                         | 7457.87                          | 13380.22                         |
| Lead                              | 400                    | 400                      | 17.6                             | 20.63                            | 12.72                            | 11.88 U                          | 35.71                            | 23.41                            | 9.31                             | 9.38 U                           |
| Manganese                         | 180                    | 360                      | 241.84                           | 179.3                            | 115.38                           | 135.2                            | 103.53                           | 90.95 U                          | 156.58                           | 75.9 U                           |

Table 5-8  
 Surface Soil X-Ray Fluorescence (XRF) Analytical Results  
 Sigmon's Septic Tank Site  
 Statesville, Iredell County, North Carolina

|                                   | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I02<br>Feb-05<br>0" bls | SS-SF/SB-I02<br>Feb-05<br>6" bls | SS-SF/SB-I04<br>Feb-05<br>0" bls |
|-----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds ( ppm)</b> |                        |                          |                                  |                                  |                                  |
| Arsenic                           | 0.39                   | 4.4                      | 4.89 U                           | 4.55 U                           | 5.33 U                           |
| Chromium                          | 30                     | 30                       | 90.73 U                          | 88.66 U                          | 103.34 U                         |
| Iron                              | 2300                   |                          | 6879.36                          | 6874.27                          | 8183.68                          |
| Lead                              | 400                    | 400                      | 13.9                             | 7.44                             | 8.03 U                           |
| Manganese                         | 180                    | 360                      | 76.68                            | 50.67 U                          | 159.97                           |

Table 5-9  
Surface Soil Data Comparison: XRF Screening vs. Laboratory Confirmation Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

| Metal           | Arsenic |      | Chromium |       | Iron     |       | Lead   |      | Manganese |      |
|-----------------|---------|------|----------|-------|----------|-------|--------|------|-----------|------|
|                 | XRF     | Lab  | XRF      | Lab   | XRF      | Lab   | XRF    | Lab  | XRF       | Lab  |
| Action Level 1  | 0.39    |      | 30       |       | 2300     |       | 400    |      | 180       |      |
| Action Level 2  | 0.44    |      | 30       |       |          |       | 400    |      | 360       |      |
| SS-SF0-B25_0205 | 5.03U   | 3.1  | 118.13 U | 56J   | 49347.73 | 57000 | 9.6    | 16J  | 70.97 U   | 130  |
| SS-SF1-C04_0205 | 5.48U   | R    | 112.35 U | 9.4J  | 6896.73  | 9700  | 8.43 U | 12   | 61.02 U   | 74   |
| SS-SF0-C08_0205 | 5.47U   | R    | 85.46 U  | 14J   | 18574.41 | 17000 | 18.29  | 22.5 | 117.26    | 125  |
| SS-SF1-C12_0205 | 6.41    | 1.9J | 103.07 U | 13J   | 14474.19 | 16000 | 23.07  | 20   | 278.39    | 210  |
| SS-SF0-C14_0205 | 4.52U   | 2.1J | 82.86 U  | 16J   | 10737.85 | 17000 | 11.56  | 32   | 164.45    | 210  |
| SS-SF0-C22_0205 | 4.04U   | 1.4J | 83.35 U  | 23J   | 16399.99 | 29000 | 6.4 U  | 16.5 | 79.21     | 315  |
| SS-SF0-D05_0205 | 4.68U   | R    | 83.03 U  | 12J   | 4842.59  | 11000 | 7.27   | 18   | 85.94     | 130  |
| SS-SF0-D07_0205 | 4.39U   | 1.4J | 82.14 U  | 9.2J  | 8375.49  | 11000 | 7.98   | 9.2J | 51.5      | 88   |
| SS-SF0-D09_0205 | 5.26U   | 1.2U | 90.94 U  | 7.9J  | 7156.23  | 7700  | 17.46  | 11J  | 140.06    | 140  |
| SS-SF0-D11_0205 | 3.63U   | 2.6J | 69.27 U  | 26J   | 14922.36 | 26000 | 33.43  | 43J  | 53.49     | 280  |
| SS-SF0-D13_0205 | 6.34U   | 1.6  | 97.65 U  | 10J   | 11503.14 | 13000 | 40.57  | 38   | 55.22 U   | 99   |
| SS-SF0-D15_0205 | 4.45U   | 2.1J | 77.63 U  | 15J   | 15105.17 | 21000 | 12.23  | 28   | 106.85    | 260  |
| SS-SF0-D17_0205 | 5.2U    | UR   | 109.21 U | 69J   | 22063.89 | 40000 | 10.37  | 12   | 194.4     | 390  |
| SS-SF0-D21_0205 | 5.86U   | R    | 131.89 U | 80J   | 31043.28 | 50000 | 17.87  | 15J  | 452.76    | 770  |
| SS-SF0-E06_0205 | 6.11    | R    | 91.08 U  | 8.2J  | 6283.52  | 7400  | 15.55  | 11   | 61.83     | 61   |
| SS-SF0-E08_0205 | 5.62U   | R    | 119.48 U | 21J   | 16292.07 | 28500 | 11.04  | 11   | 95.89     | 69.5 |
| SS-SF0-E10_0205 | 5.15U   | 4.6J | 94.21 U  | 26J   | 8752.18  | 26000 | 18.09  | 37   | 186.42    | 190  |
| SS-SF0-E12_0205 | 5.56U   | 1.6J | 93.79 U  | 27J   | 8431.73  | 19000 | 27.38  | 53   | 51.3 U    | 100  |
| SS-SF0-E14_0205 | 5.69U   | R    | 96 U     | 14J   | 12307.43 | 11000 | 28.51  | 35J  | 98.33     | 100  |
| SS-SF0-E16_0205 | 5.52U   | 2.3J | 103.01 U | 14J   | 10946.77 | 13000 | 21.04  | 24   | 103.14    | 140  |
| SS-SF0-E18_0205 | 4.75    | 3.1  | 99.13 U  | 36J   | 15460.34 | 33000 | 7.03 U | 17J  | 196.61    | 130  |
| SS-SF1-E20_0205 | 4.18U   | R    | 81.27 U  | 8.6J  | 5028.71  | 9000  | 7.13   | 12   | 202.18    | 440  |
| SS-SF1-E22_0205 | 4.21U   | 1.6J | 91.04 U  | 20J   | 14920.02 | 17000 | 18.6   | 17   | 273.07    | 220  |
| SS-SF0-E24_0205 | 4.51U   | 2.2  | 87.19 U  | 18J   | 19084.76 | 22000 | 8.69   | 5.6J | 182.27    | 79   |
| SS-SF1-F05_0205 | 5.46U   | 2.2J | 137.62   | 39J   | 30284.04 | 38000 | 10.21  | 15   | 122.22    | 88   |
| SS-SF0-F07_0205 | 5.26U   | 1.2U | 119.17 U | 33J   | 18391.95 | 26000 | 10.43  | 14J  | 552       | 340  |
| SS-SF1-F09_0205 | 4.98U   | UR   | 110.41 U | 20J   | 22739    | 25000 | 7.85 U | 12J  | 188.02    | 230  |
| SS-SF0-F11_0205 | 5.66U   | 2.3  | 114.74 U | 18J   | 23432.19 | 28000 | 16.54  | 16J  | 87.76     | 99   |
| SS-SF1-F13_0205 | 5.72U   | 1.2J | 93.87 U  | 20J   | 11177.98 | 14000 | 36.77  | 40   | 91.69     | 100  |
| SS-SF1-F15_0205 | 2.91U   | R    | 53.79 U  | 20J   | 7016.93  | 12000 | 18.72  | 33J  | 56.92     | 95   |
| SS-SF0-F17_0205 | 5.28U   | R    | 113.41 U | 19J   | 17749.27 | 21000 | 7.99 U | 7.3J | 107.97    | 220  |
| SS-SF0-F19_0205 | 4.93U   | R    | 101.24 U | 23J   | 17094.54 | 28000 | 7.45 U | 13J  | 213.83    | 500  |
| SS-SF0-F21_0205 | 5.54U   | 1.6J | 102.03 U | 18J   | 13101.8  | 22000 | 15.38  | 32J  | 125.51    | 290  |
| SS-SF0-F23_0205 | 7.6U    | UR   | 106.38 U | 27J   | 15050.92 | 18000 | 77.81  | 94J  | 218.58    | 180  |
| SS-SF0-G02_0205 | 4.05U   | 1.2U | 71.71 U  | 3.2J  | 17293.89 | 3500  | 13.42  | 6.6  | 83.73     | 40   |
| SS-SF0-G06_0205 | 5.52U   | 1.8J | 201.53   | 42J   | 24891.02 | 31000 | 19     | 25J  | 166.34    | 260  |
| SS-SF0-G08_0205 | 7.02U   | R    | 114.3 U  | 29J   | 17906.78 | 29000 | 148.43 | 44J  | 155.51    | 280  |
| SS-SF0-G10_0205 | 5.51U   | 1.7J | 75.42 U  | 37J   | 14761.76 | 32000 | 39.62  | 43   | 73.69     | 440  |
| SS-SF0-G12_0205 | 5.35U   | 1.6J | 114.73 U | 20.5J | 19893.51 | 27000 | 8.25   | 13J  | 130.04    | 120  |
| SS-SF0-G14_0205 | 5.48U   | 1.2J | 96.87 U  | 33J   | 10579.47 | 14000 | 24.15  | 36   | 71.33     | 110  |
| SS-SF0-G16_0205 | 4.84U   | UR   | 92.82 U  | 34J   | 44813.86 | 82000 | 9.38   | 15J  | 257.51    | 770J |
| SS-SF0-G18_0205 | 5.09U   | R    | 107.06 U | 38J   | 14111.58 | 33000 | 7.75   | 14J  | 225.45    | 520  |
| SS-SF0-G20_0205 | 5.05U   | UR   | 124.06   | 16J   | 12345.76 | 16000 | 13.55  | 22J  | 126.28    | 330  |
| SS-SF0-G22_0205 | 5.8U    | UR   | 116.42 U | 23J   | 31899.43 | 30000 | 17.36  | 16J  | 126.12    | 110  |
| SS-SF0-G24_0205 | 5.78U   | 1.3  | 80.29 U  | 12J   | 8367.39  | 16000 | 42.36  | 14J  | 154.32    | 92   |
| SS-SF0-H05_0205 | 4.74U   | 1.8J | 91.55 U  | 16.5J | 15516.01 | 17500 | 18.29  | 16J  | 221.23    | 185  |
| SS-SF0-H07_0205 | 5.73U   | R    | 108.15 U | 26J   | 11655.31 | 15000 | 21.96  | 21J  | 116.61    | 150  |
| SS-SF0-H09_0205 | 6.68U   | 1.7J | 108.31 U | 64J   | 21411.02 | 29500 | 51.63  | 87J  | 358.02    | 350  |

Table 5-9  
Surface Soil Data Comparison: XRF Screening vs. Laboratory Confirmation Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

| Metal<br>Analysis Type | Arsenic |      | Chromium |       | Iron     |       | Lead    |      | Manganese |      |
|------------------------|---------|------|----------|-------|----------|-------|---------|------|-----------|------|
|                        | XRF     | Lab  | XRF      | Lab   | XRF      | Lab   | XRF     | Lab  | XRF       | Lab  |
| Action Level 1         | 0.39    |      | 30       |       | 2300     |       | 400     |      | 180       |      |
| Action Level 2         | 0.44    |      | 30       |       |          |       | 400     |      | 360       |      |
| SS-SF0-H11_0205        | 6.12U   | 1.2J | 123.62 U | 24.5J | 14397.42 | 16000 | 29.21   | 16J  | 243.7     | 190  |
| SS-SF0-H13_0205        | 5.61U   | R    | 99.84 U  | 22J   | 9338.51  | 10000 | 20.09   | 20J  | 121.99    | 110  |
| SS-SF0-H15_0205        | 5.5U    | 2.1J | 117.8 U  | 45J   | 14843.13 | 26000 | 14.5    | 28J  | 132.87    | 240  |
| SS-SF0-H17_0205        | 5.34U   | UR   | 116.12 U | 10J   | 19257.36 | 24000 | 9.63    | 12J  | 69.64 U   | 51   |
| SS-SF0-H19_0205        | 5.51U   | R    | 99.88 U  | 17J   | 13524.02 | 15000 | 20.63   | 29J  | 241.84    | 370  |
| SS-SF0-H21_0205        | 5.61U   | UR   | 109.63 U | 16J   | 20476.9  | 27000 | 12.72   | 11J  | 135.2     | 290  |
| SS-SF0-H23_0205        | 6.43U   | 1.4J | 103.8 U  | 18J   | 29694.32 | 26000 | 35.71   | 37J  | 103.53    | 140  |
| SS-SF0-I06_0205        | 5.07U   | 2.8J | 100.68 U | 25J   | 10419.25 | 22000 | 10.39   | 17.5 | 121.76    | 235  |
| SS-SF0-I08_0205        | 5.38U   | 1.6  | 97.58 U  | 18J   | 7102.58  | 8100  | 11.3    | 6.8J | 95.51     | 190  |
| SS-SF0-I10_0205        | 4.94U   | UR   | 103 U    | 23J   | 12259.39 | 24000 | 8.16    | 13J  | 230.69    | 170  |
| SS-SF0-I12_0205        | 3.99U   | R    | 72.95 U  | 5J    | 4078.26  | 6200  | 13.22   | 13J  | 1202.32   | 180  |
| SS-SF0-I14_0205        | 3.41U   | 1.3J | 62.04-U  | 5.5J  | 6506.95  | 6000  | 15.08   | 15J  | 696.57    | 24   |
| SS-SF0-I16_0205        | 4.06U   | 1.5J | 80.18-U  | 12J   | 9069.02  | 14000 | 6.12-U  | 13J  | 44.74-U   | 140  |
| SS-SF0-I18_0205        | 4.59U   | 1.4J | 89.19-U  | 15J   | 10731.03 | 15000 | 8.1     | 12J  | 210.46    | 170J |
| SS-SF0-I20_0205        | 7.45    | 1.2J | 100.67-U | 9.8J  | 12239.75 | 10000 | 14.01   | 43   | 1757.22   | 130J |
| SS-SF0-I22_0205        | 4.75U   | UR   | 95.29-U  | 15J   | 11564.78 | 15000 | 11.22   | 13J  | 152.12    | 96   |
| SS-SF0-I24_0205        | 4.66U   | R    | 88.25-U  | 6.7J  | 8147.04  | 7400  | 10.14-U | 11   | 511.11    | 490  |
| SS-SF0-J03_0205        | 4.58U   | 1.4  | 79.42-U  | 11J   | 10819.17 | 9800  | 13.96   | 11J  | 481.22    | 190  |
| SS-SF0-J07_0205        | 4.11U   | 2.4  | 80.41-U  | 17J   | 16392.02 | 24000 | 6.56-U  | 14J  | 44.57-U   | 170  |
| SS-SF0-J23_0205        | 5.46U   | 1.9  | 129.08-U | 9.4J  | 21216.52 | 13000 | 8.41-U  | 8.4J | 74.68-U   | 75   |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-07<br>Feb-05<br>25-27' bls | SS-SF/SB-07<br>Feb-05<br>30-32' bls | SS-SF/SB-12<br>Feb-05<br>2-4' bls | SS-SF/SB-12<br>Feb-05<br>5-7' bls | SS-SF/SB-12<br>Feb-05<br>10-12' bls | SS-SF/SB-12<br>Feb-05<br>15-17' bls | SS-SF/SB-12<br>Feb-05<br>20-22' bls | SS-SF/SB-12<br>Feb-05<br>25-27' bls |
|----------------------------------|------------------------|--------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                     |                                     |                                   |                                   |                                     |                                     |                                     |                                     |
| Arsenic                          | 1.6                    | 4.4                      | 5.75 U                              | 5.62 U                              | 6.01                              | 5.43 U                            | 5.32 U                              | 5.11 U                              | 5.23 U                              | 5.16 U                              |
| Chromium                         | 64                     | 30                       | 124.57 U                            | 118.6 U                             | 125.33 U                          | 127.65 U                          | 128.54 U                            | 116.29 U                            | 113.8 U                             | 112.55 U                            |
| Iron                             | 10000                  |                          | 13402.23                            | 11612.08                            | 26479.45                          | 24890.76                          | 25802.61                            | 18390.99                            | 16697.21                            | 10458.73                            |
| Lead                             | 80                     | 400                      | 9.12 U                              | 8.45 U                              | 12.81                             | 8.49                              | 7.96 U                              | 8.31 U                              | 8.75                                | 7.86 U                              |
| Manganese                        | 1900                   | 360                      | 347.64                              | 407.3                               | 172.26                            | 280.27                            | 511.09                              | 202.54                              | 319.41                              | 126.51                              |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-12<br>Feb-05<br>30-32' bls | SS-SF/SB-13<br>Feb-05<br>25-27' bls | SS-SF/SB-13<br>Feb-05<br>30-32' bls | SS-SB-14<br>Feb-05<br>2-4' bls | SS-SB-14<br>Feb-05<br>5-7' bls | SS-SB-14<br>Feb-05<br>10-12' bls | SS-SB-14<br>Feb-05<br>15-17' bls | SS-SB-14<br>Feb-05<br>20-22' bls |
|----------------------------------|------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                     |                                     |                                     |                                |                                |                                  |                                  |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 5.19 U                              | 6.26 U                              | 6.26 U                              | 6.04 U                         | 5.24 U                         | 5.74 U                           | 5.64 U                           | 5.35 U                           |
| Chromium                         | 64                     | 30                       | 110.23 U                            | 148.1 U                             | 148.1 U                             | 128.04 U                       | 115.69 U                       | 130.91 U                         | 119.43 U                         | 120.07 U                         |
| Iron                             | 10000                  |                          | 10632.25                            | 40045.11                            | 40045.11                            | 29409.07                       | 14069.64                       | 21480.56                         | 16320.78                         | 15260.83                         |
| Lead                             | 80                     | 400                      | 7.93 U                              | 11.46                               | 11.46                               | 14.56                          | 10.68                          | 8.75                             | 13.23                            | 10.92                            |
| Manganese                        | 1900                   | 360                      | 304.88                              | 98.32                               | 98.32                               | 105.56                         | 68.48                          | 195.12                           | 308.77                           | 401.78                           |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-14<br>Feb-05<br>25-27' bls | SS-SB-14<br>Feb-05<br>30-32' bls | SS-SB-15<br>Feb-05<br>2-4' bls | SS-SB-15<br>Feb-05<br>5-7' bls | SS-SB-15<br>Feb-05<br>10-12' bls | SS-SB-15<br>Feb-05<br>15-17' bls | SS-SB-15<br>Feb-05<br>20-22' bls | SS-SB-15<br>Feb-05<br>25-27' bls | SS-SB-15<br>Feb-05<br>30-32' bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                |                                |                                  |                                  |                                  |                                  |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 5.92 U                           | 6.2 U                            | 5.86 U                         | 5.47 U                         | 6.58 U                           | 5.8 U                            | 5.66 U                           | 5.32 U                           | 5.77 U                           |
| Chromium                         | 64                     | 30                       | 110.63 U                         | 109.65 U                         | 137.67 U                       | 109.01 U                       | 170.15 U                         | 135.85 U                         | 123.7 U                          | 118.86 U                         | 122.83 U                         |
| Iron                             | 10000                  |                          | 2641.83                          | 2658.05                          | 31373.21                       | 15747.55                       | 59536.16                         | 25166.38                         | 21171.02                         | 17952.24                         | 15689.05                         |
| Lead                             | 80                     | 400                      | 15.08                            | 21.2                             | 15.19                          | 13.57                          | 18.52                            | 11.68                            | 8.73                             | 8.33                             | 8.76 U                           |
| Manganese                        | 1900                   | 360                      | 97.34                            | 56.71 U                          | 81.39 U                        | 64.7 U                         | 1380.4                           | 629.39                           | 518.03                           | 530.53                           | 376.1                            |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-16<br>Feb-05<br>2-4' bls | SS-SB-16<br>Feb-05<br>5-7' bls | SS-SB-16<br>Feb-05<br>10-12' bls | SS-SB-16<br>Feb-05<br>15-17' bls | SS-SB-16<br>Feb-05<br>20-22' bls | SS-SB-16<br>Feb-05<br>25-27' bls | SS-SB-16<br>Feb-05<br>30-32' bls | SS-SB-17<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                |                                |                                  |                                  |                                  |                                  |                                  |                                |
| Arsenic                          | 1.6                    | 4.4                      | 5.5 U                          | 5.65 U                         | 5.39 U                           | 5.06 U                           | 5.24 U                           | 5.85 U                           | 5.73 U                           | 5.66 U                         |
| Chromium                         | 64                     | 30                       | 127.35 U                       | 119.84 U                       | 120.34 U                         | 108.36 U                         | 109.49 U                         | 122.42 U                         | 124.34 U                         | 147.52                         |
| Iron                             | 10000                  |                          | 25012.62                       | 25204.59                       | 20499.7                          | 14046.36                         | 16498.28                         | 22904.37                         | 18384.18                         | 28731.22                       |
| Lead                             | 80                     | 400                      | 13.72                          | 18.08                          | 14.47                            | 10.55                            | 7.91 U                           | 16.33                            | 10.52                            | 9.26                           |
| Manganese                        | 1900                   | 360                      | 176.6                          | 74.21 U                        | 170.14                           | 319.11                           | 28.96                            | 1248.25                          | 470.53                           | 79.28 U                        |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-17<br>Feb-05<br>5-7' bls | SS-SB-17<br>Feb-05<br>10-12' bls | SS-SB-17<br>Feb-05<br>15-17' bls | SS-SB-17<br>Feb-05<br>20-22' bls | SS-SB-17<br>Feb-05<br>25-27' bls | SS-SB-17<br>Feb-05<br>30-32' bls | SS-SB-18<br>Feb-05<br>2-4' bls | SS-SB-18<br>Feb-05<br>5-7' bls |
|----------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                |                                  |                                  |                                  |                                  |                                  |                                |                                |
| Arsenic                          | 1.6                    | 4.4                      | 5.96 U                         | 5.79 U                           | 5.64 U                           | 5.49 U                           | 5.42 U                           | 5.1 U                            | 5.57 U                         | 5.81 U                         |
| Chromium                         | 64                     | 30                       | 120.89 U                       | 119.81 U                         | 118.54 U                         | 122.79 U                         | 110.36 U                         | 112.37 U                         | 260.46                         | 133.48 U                       |
| Iron                             | 10000                  |                          | 24173.68                       | 14092.14                         | 12894.16                         | 16307.9                          | 12435.65                         | 12052.33                         | 28406.66                       | 33434.2                        |
| Lead                             | 80                     | 400                      | 16.03                          | 14.6                             | 9.28                             | 8.49 U                           | 8.17 U                           | 7.89 U                           | 9.11                           | 14.21                          |
| Manganese                        | 1900                   | 360                      | 77.23 U                        | 262.71                           | 362.46                           | 514.87                           | 405.51                           | 639.76                           | 80.38                          | 81.53 U                        |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-18<br>Feb-05<br>10-12' bls | SS-SB-18<br>Feb-05<br>20-22' bls | SS-SB-18<br>Feb-05<br>25-27' bls | SS-SB-18<br>Feb-05<br>30-32' bls | SS-SB-19<br>Feb-05<br>2-4' bls | SS-SB-19<br>Feb-05<br>5-7' bls | SS-SB-19<br>Feb-05<br>10-12' bls | SS-SB-19<br>Feb-05<br>15-17' bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                |                                |                                  |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 5.65 U                           | 4.66 U                           | 4.56 U                           | 6 U                              | 6.26 U                         | 6.26 U                         | 6.26 U                           | 6.26 U                           |
| Chromium                         | 64                     | 30                       | 128.7 U                          | 106.53 U                         | 101.46 U                         | 111 U                            | 148.1 U                        | 148.1 U                        | 148.1 U                          | 148.1 U                          |
| Iron                             | 10000                  |                          | 23702.04                         | 13312.68                         | 11449.06                         | 5405                             | 40045.11                       | 40045.11                       | 40045.11                         | 40045.11                         |
| Lead                             | 80                     | 400                      | 13.24                            | 7.2 U                            | 7.1 U                            | 15 U                             | 11.46                          | 11.46                          | 11.46                            | 11.46                            |
| Manganese                        | 1900                   | 360                      | 175.44                           | 209.04                           | 251.23                           | 111                              | 98.32                          | 98.32                          | 98.32                            | 98.32                            |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-19<br>Feb-05<br>20-22' bls | SS-SB-19<br>Feb-05<br>25-27' bls | SS-SB-19<br>Feb-05<br>30-32' bls | SS-SB-20<br>Feb-05<br>2-4' bls | SS-SB-20<br>Feb-05<br>5-7' bls | SS-SB-20<br>Feb-05<br>10-12' bls | SS-SB-20<br>Feb-05<br>15-17' bls | SS-SB-20<br>Feb-05<br>20-22' bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                  |                                |                                |                                  |                                  |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 6.26 U                           | 6.26 U                           | 6.26 U                           | 5.76 U                         | 5.81 U                         | 5.16 U                           | 5.13 U                           | 5.46 U                           |
| Chromium                         | 64                     | 30                       | 148.1 U                          | 148.1 U                          | 148.1 U                          | 119.54 U                       | 126.24 U                       | 105.11 U                         | 106.9 U                          | 111.16 U                         |
| Iron                             | 10000                  |                          | 40045.11                         | 40045.11                         | 40045.11                         | 20589.08                       | 22688.05                       | 9107.4                           | 5039.61                          | 10805.92                         |
| Lead                             | 80                     | 400                      | 11.46                            | 11.46                            | 11.46                            | 17.67                          | 11.53                          | 7.99 U                           | 8.02 U                           | 11.71                            |
| Manganese                        | 1900                   | 360                      | 98.32                            | 98.32                            | 98.32                            | 66.37 U                        | 74.64 U                        | 56.17 U                          | 55.99 U                          | 349.43                           |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-20<br>Feb-05<br>25-27' bls | SS-SB-20<br>Feb-05<br>30-32' bls | SS-SB-21<br>Feb-05<br>2-4' bls | SS-SB-21<br>Feb-05<br>5-7' bls | SS-SB-21<br>Feb-05<br>10-12' bls | SS-SB-21<br>Feb-05<br>15-17' bls | SS-SB-21<br>Feb-05<br>20-22' bls | SS-SB-22<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                |                                |                                  |                                  |                                  |                                |
| Arsenic                          | 1.6                    | 4.4                      | 5.7 U                            | 5.33 U                           | 5.93                           | 5.36 U                         | 5.95 U                           | 5.12 U                           | 5.43 U                           | 5.67 U                         |
| Chromium                         | 64                     | 30                       | 120.28 U                         | 110.32 U                         | 141.24 U                       | 121.12 U                       | 110.93 U                         | 113.07 U                         | 111.09 U                         | 130.93 U                       |
| Iron                             | 10000                  |                          | 17800.89                         | 8478.5                           | 31519.7                        | 18809.04                       | 9650.98                          | 12143.26                         | 7085.43                          | 23331.3                        |
| Lead                             | 80                     | 400                      | 13.99                            | 8.53 U                           | 8.3 U                          | 8.22 U                         | 11.5                             | 8.11 U                           | 11.88                            | 11.01                          |
| Manganese                        | 1900                   | 360                      | 413.22                           | 210.67                           | 84.24 U                        | 70.96 U                        | 65.34 U                          | 228.67                           | 309.08                           | 192.45                         |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-22<br>Feb-05<br>5-7' bls | SS-SB-22<br>Feb-05<br>10-12' bls | SS-SB-22<br>Feb-05<br>15-17' bls | SS-SB-22<br>Feb-05<br>20-22' bls | SS-SB-22<br>Feb-05<br>25-27' bls | SS-SB-22<br>Feb-05<br>30-32' bls | SS-SB-23<br>Feb-05<br>2-4' bls | SS-SB-23<br>Feb-05<br>5-7' bls |
|----------------------------------|------------------------|--------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                |                                  |                                  |                                  |                                  |                                  |                                |                                |
| Arsenic                          | 1.6                    | 4.4                      | 5.73 U                         | 5.4 U                            | 6.32                             | 5.44 U                           | 5.56 U                           | 5.13 U                           | 6.01 U                         | 7.08                           |
| Chromium                         | 64                     | 30                       | 114.63 U                       | 116.05 U                         | 114.11 U                         | 115.72 U                         | 112.67 U                         | 113.6 U                          | 130.72 U                       | 149.64 U                       |
| Iron                             | 10000                  |                          | 13661.59                       | 16840.05                         | 14945.01                         | 12175.15                         | 9248.14                          | 9800.6                           | 19961.22                       | 30148.98                       |
| Lead                             | 80                     | 400                      | 16.76                          | 11.3                             | 8.13 U                           | 10.31                            | 12.29                            | 7.68 U                           | 14.33                          | 8.82 U                         |
| Manganese                        | 1900                   | 360                      | 115.51                         | 261.63                           | 220.42                           | 285.12                           | 281.63                           | 167.5                            | 305.24                         | 430.13                         |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-23<br>Feb-05<br>10-12' bls | SS-SB-23<br>Feb-05<br>15-17' bls | SS-SB-23<br>Feb-05<br>25-27' bls | SS-SB-23<br>Feb-05<br>30-32' bls | SS-SB-24<br>Feb-05<br>10-12' bls | SS-SB-24<br>Feb-05<br>15-17' bls | SS-SB-24<br>Feb-05<br>20-22' bls | SS-SB-24<br>Feb-05<br>25-27' bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 8.5 U                            | 5.79 U                           | 5.11 U                           | 5.36 U                           | 5.81 U                           | 6.87 U                           | 6.02 U                           | 6.9 U                            |
| Chromium                         | 64                     | 30                       | 159.92 U                         | 125.23 U                         | 113.38 U                         | 105.86 U                         | 125.62 U                         | 144.87 U                         | 187.72 U                         | 163.25 U                         |
| Iron                             | 10000                  |                          | 14692.02                         | 14480.85                         | 9440.62                          | 8780.25                          | 16616.23                         | 18637.92                         | 58638.89                         | 20178.99                         |
| Lead                             | 80                     | 400                      | 13.92                            | 12.84                            | 7.91 U                           | 8.87                             | 8.81 U                           | 16.47                            | 9.35 U                           | 10.59 U                          |
| Manganese                        | 1900                   | 360                      | 192.39                           | 245.79                           | 255.31                           | 219.05                           | 75.82 U                          | 77.77 U                          | 194.51                           | 675.64                           |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-25<br>Feb-05<br>2-4' bls | SS-SB-25<br>Feb-05<br>5-7' bls | SS-SB-25<br>Feb-05<br>10-12' bls | SS-SB-25<br>Feb-05<br>15-17' bls | SS-SB-25<br>Feb-05<br>20-22' bls | SS-SB-26<br>Feb-05<br>2-4' bls | SS-SB-26<br>Feb-05<br>5-7' bls | SS-SB-26<br>Feb-05<br>10-12' bls |
|----------------------------------|------------------------|--------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                |                                |                                  |                                  |                                  |                                |                                |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 6.03 U                         | 5.53 U                         | 5.91 U                           | 5.78 U                           | 5.91 U                           | 6.06 U                         | 6.2 U                          | 6.35 U                           |
| Chromium                         | 64                     | 30                       | 144.24 U                       | 132.8 U                        | 132.19 U                         | 119.9 U                          | 169.05 U                         | 231.27                         | 131.14 U                       | 255.17                           |
| Iron                             | 10000                  |                          | 36660.64                       | 26613.95                       | 26798.29                         | 12326.47                         | 45849.84                         | 30262.41                       | 22289.26                       | 65206.15                         |
| Lead                             | 80                     | 400                      | 13.24                          | 13.69                          | 15.4                             | 9.22                             | 8.55 U                           | 18.91                          | 18.23                          | 12.39                            |
| Manganese                        | 1900                   | 360                      | 87.19 U                        | 181.69                         | 193.19                           | 200.94                           | 1526.82                          | 208.62                         | 183.73                         | 3505.25                          |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SB-26<br>Feb-05<br>15-17' bls | SS-SB-26<br>Feb-05<br>20-22' bls | SS-SB-26<br>Feb-05<br>25-27' bls | SS-SB-26<br>Feb-05<br>30-32' bls | SS-SB-27<br>Feb-05<br>2-4' bls | SS-SB-27<br>Feb-05<br>5-7' bls | SS-SB-27<br>Feb-05<br>10-12' bls | SS-SB-27<br>Feb-05<br>20-22' bls |
|----------------------------------|------------------------|--------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                  |                                  |                                  |                                  |                                |                                |                                  |                                  |
| Arsenic                          | 1.6                    | 4.4                      | 6.01 U                           | 6.03 U                           | 6.39 U                           | 6.32 U                           | 5.95 U                         | 5.45 U                         | 6.1 U                            | 5.84 U                           |
| Chromium                         | 64                     | 30                       | 141.58 U                         | 137.3 U                          | 175.63 U                         | 141.02 U                         | 141.59 U                       | 124.04 U                       | 135.33 U                         | 129.27 U                         |
| Iron                             | 10000                  |                          | 25817.06                         | 20927.08                         | 42801.61                         | 19066.61                         | 30285.64                       | 20876.7                        | 17829.93                         | 18139.06                         |
| Lead                             | 80                     | 400                      | 9.09 U                           | 13.1                             | 10.76                            | 11                               | 12.84                          | 8.96                           | 15.54                            | 16.38                            |
| Manganese                        | 1900                   | 360                      | 545.26                           | 286.07                           | 928.7                            | 232.6                            | 213.49                         | 152.62                         | 474.96                           | 408.88                           |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-A10<br>Feb-05<br>2-4' bls | SS-SF/SB-C12<br>Feb-05<br>2-4' bls | SS-SF/SB-C24<br>Feb-05<br>2-4' bls | SS-SF/SB-D03<br>Feb-05<br>2-4' bls | SS-SF/SB-D17<br>Feb-05<br>2-4' bls | SS-SF/SB-D19<br>Feb-05<br>2-4' bls | SS-SF/SB-D21<br>Feb-05<br>2-4' bls | SS-SF/SB-D23<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Arsenic                          | 1.6                    | 4.4                      | 5.95 U                             | 5.97 U                             | 5.6 U                              | 5.17 U                             | 6.26 U                             | 6.26 U                             | 6.56 U                             | 6.5 U                              |
| Chromium                         | 64                     | 30                       | 131.03 U                           | 119.08 U                           | 116.94 U                           | 111.78 U                           | 148.1 U                            | 148.1 U                            | 177.22 U                           | 181.92 U                           |
| Iron                             | 10000                  |                          | 30214.92                           | 18291.93                           | 8941.37                            | 16890.91                           | 40045.11                           | 40045.11                           | 57293.87                           | 58607.39                           |
| Lead                             | 80                     | 400                      | 8.78 U                             | 18.11                              | 8.52 U                             | 7.99 U                             | 11.46                              | 11.46                              | 13.15                              | 11.64                              |
| Manganese                        | 1900                   | 360                      | 99.17                              | 68.84 U                            | 79.39                              | 65.39 U                            | 98.32                              | 98.32                              | 111.91 U                           | 111.37 U                           |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E04<br>Feb-05<br>2-4' bls | SS-SF/SB-E06<br>Feb-05<br>2-4' bls | SS-SF/SB-E10<br>Feb-05<br>2-4' bls | SS-SF/SB-E12<br>Feb-05<br>2-4' bls | SS-SF/SB-E14<br>Feb-05<br>2-4' bls | SS-SF/SB-E18<br>Feb-05<br>2-4' bls | SS-SF/SB-E20<br>Feb-05<br>2-4' bls | SS-SF/SB-E22<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Arsenic                          | 1.6                    | 4.4                      | 5.28 U                             | 6.28 U                             | 8.17                               | 5.42 U                             | 5.92 U                             | 6.26 U                             | 6.12 U                             | 6.26 U                             |
| Chromium                         | 64                     | 30                       | 116.32 U                           | 135.62 U                           | 149.06 U                           | 118.34 U                           | 140.13 U                           | 148.1 U                            | 144.65 U                           | 148.1 U                            |
| Iron                             | 10000                  |                          | 24778.33                           | 24853.71                           | 41343.78                           | 22345.86                           | 33339.29                           | 40045.11                           | 40185.94                           | 40045.11                           |
| Lead                             | 80                     | 400                      | 8 U                                | 14.91                              | 8.8 U                              | 10.52                              | 10.79                              | 11.46                              | 11.33                              | 11.46                              |
| Manganese                        | 1900                   | 360                      | 68.7 U                             | 75.43 U                            | 90.77 U                            | 67.54 U                            | 84.72 U                            | 98.32                              | 110.22                             | 98.32                              |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-E24<br>Feb-05<br>2-4' bls | SS-SF/SB-F05<br>Feb-05<br>2-4' bls | SS-SF/SB-F07<br>Feb-05<br>2-4' bls | SS-SF/SB-F09<br>Feb-05<br>2-4' bls | SS-SF/SB-F11<br>Feb-05<br>2-4' bls | SS-SF/SB-F19<br>Feb-05<br>2-4' bls | SS-SF/SB-F23<br>Feb-05<br>2-4' bls | SS-SF/SB-F25<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Arsenic                          | 1.6                    | 4.4                      | 5.53 U                             | 6.55 U                             | 6.06 U                             | 5.82 U                             | 5.89 U                             | 6.77 U                             | 6.94 U                             | 6.19 U                             |
| Chromium                         | 64                     | 30                       | 132.2 U                            | 192.5 U                            | 133.28 U                           | 122.77 U                           | 138.99 U                           | 155.68 U                           | 177.08 U                           | 163.85 U                           |
| Iron                             | 10000                  |                          | 35363.05                           | 62986.09                           | 22325.11                           | 19086.77                           | 28047.97                           | 25654.21                           | 54416.78                           | 48225.05                           |
| Lead                             | 80                     | 400                      | 8.9                                | 12.53                              | 12.41                              | 13.57                              | 9.42                               | 17.18                              | 26.58                              | 11.32                              |
| Manganese                        | 1900                   | 360                      | 101.42                             | 115.29 U                           | 179.28                             | 83.36                              | 81.54 U                            | 1002.31                            | 496.35                             | 204.55                             |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-G04<br>Feb-05<br>2-4' bls | SS-SF/SB-G06<br>Feb-05<br>2-4' bls | SS-SF/SB-G12<br>Feb-05<br>2-4' bls | SS-SF/SB-G14<br>Feb-05<br>2-4' bls | SS-SF/SB-G18<br>Feb-05<br>2-4' bls | SS-SF/SB-G20<br>Feb-05<br>2-4' bls | SS-SF/SB-H03<br>Feb-05<br>2-4' bls | SS-SF/SB-H05<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Arsenic                          | 1.6                    | 4.4                      | 6.34                               | 6.86 U                             | 5.64 U                             | 5.86 U                             | 6.3 U                              | 6.17 U                             | 5.86 U                             | 5.54 U                             |
| Chromium                         | 64                     | 30                       | 134.23 U                           | 181.95                             | 106.46 U                           | 127.76 U                           | 130.95 U                           | 142.39 U                           | 125.78 U                           | 116.73 U                           |
| Iron                             | 10000                  |                          | 30479.89                           | 42288.16                           | 6989.27                            | 22679.49                           | 22351.54                           | 36626.34                           | 24631.66                           | 23927.06                           |
| Lead                             | 80                     | 400                      | 8.67 U                             | 14.11                              | 16.26                              | 12.55                              | 16.14                              | 9.1                                | 12.34                              | 12.42                              |
| Manganese                        | 1900                   | 360                      | 80.53 U                            | 95.76 U                            | 56.06 U                            | 74.4 U                             | 348                                | 86.28 U                            | 74.55 U                            | 7139 U                             |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-H09<br>Feb-05<br>2-4' bls | SS-SF/SB-H11<br>Feb-05<br>2-4' bls | SS-SF/SB-H19<br>Feb-05<br>2-4' bls | SS-SF/SB-H25<br>Feb-05<br>2-4' bls | SS-SF/SB-I10<br>Feb-05<br>2-4' bls | SS-SF/SB-I12<br>Feb-05<br>2-4' bls | SS-SF/SB-I14<br>Feb-05<br>2-4' bls | SS-SF/SB-I18<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Arsenic                          | 1.6                    | 4.4                      | 6.38 U                             | 6.26 U                             | 6.37 U                             | 5.99 U                             | 5.63 U                             | 8.02                               | 5.87 U                             | 5.99 U                             |
| Chromium                         | 64                     | 30                       | 131.38 U                           | 148.1 U                            | 140.07 U                           | 142.39 U                           | 129.21 U                           | 133.25 U                           | 143.49 U                           | 117.76 U                           |
| Iron                             | 10000                  |                          | 19090.71                           | 40045.11                           | 36397.09                           | 31691.04                           | 16173.48                           | 30249.22                           | 32908.36                           | 18371.86                           |
| Lead                             | 80                     | 400                      | 13.26                              | 11.46                              | 13.98                              | 8.94 U                             | 8.31 U                             | 8.47 U                             | 12.51                              | 17.32                              |
| Manganese                        | 1900                   | 360                      | 78.66 U                            | 98.32                              | 90.18 U                            | 84.24 U                            | 310.36                             | 86.11                              | 83.85 U                            | 204.66                             |

Table 5-10  
Subsurface Soil X-Ray Fluorescence (XRF) Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                  | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | SS-SF/SB-I20<br>Feb-05<br>2-4' bls | SS-SF/SB-I24<br>Feb-05<br>2-4' bls | SS-SF/SB-J03<br>Feb-05<br>2-4' bls | SS-SF/SB-J05<br>Feb-05<br>2-4' bls | SS-SF/SB-J11<br>Feb-05<br>2-4' bls | SS-SF/SB-J13<br>Feb-05<br>2-4' bls | SS-SF/SB-J21<br>Feb-05<br>2-4' bls | SS-SF/SB-J25<br>Feb-05<br>2-4' bls |
|----------------------------------|------------------------|--------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Inorganic Compounds (ppm)</b> |                        |                          |                                    |                                    |                                    |                                    |                                    |                                    |                                    |                                    |
| Arsenic                          | 1.6                    | 4.4                      | 6.07                               | 6.95                               | 5.47 U                             | 5.43 U                             | 5.75 U                             | 6.17 U                             | 6.1 U                              | 6.26 U                             |
| Chromium                         | 64                     | 30                       | 137.99 U                           | 151.05 U                           | 115.75 U                           | 107.81 U                           | 128.77 U                           | 139.22 U                           | 118.17 U                           | 148.1 U                            |
| Iron                             | 10000                  |                          | 29458.71                           | 35519.59                           | 11506.76                           | 6691.55                            | 25450.74                           | 37058.95                           | 11260.19                           | 40045.11                           |
| Lead                             | 80                     | 400                      | 10.95                              | 9.33 U                             | 12.19                              | 11.04                              | 8.61 U                             | 15.19                              | 14.42                              | 11.46                              |
| Manganese                        | 1900                   | 360                      | 82.27 U                            | 89.57 U                            | 97.13                              | 59.34 U                            | 116.09                             | 85.58 U                            | 163.96                             | 98.32                              |

Table 5-11  
Subsurface Soil Data Comparison: XRF Screening vs. Laboratory Confirmation Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

| Metal                              | Arsenic |      | Chromium |      | Iron     |       | Lead   |      | Manganese |       |
|------------------------------------|---------|------|----------|------|----------|-------|--------|------|-----------|-------|
| Analysis Type                      | XRF     | Lab  | XRF      | Lab  | XRF      | Lab   | XRF    | Lab  | XRF       | Lab   |
| R9 PRG IND SOIL                    | 1.6     |      | 64       |      | 10000    |       | 80     |      | 1900      |       |
| NC SRG                             | 4.4     |      | 30       |      |          |       | 400    |      | 360       |       |
| SS-SB2X-12_0205 / SS-SB2-12_0205   | 5.43 U  | 2.2J | 127.65 U | 23J  | 24890.76 | 36000 | 8.49   | 17J  | 280.27    | 270   |
| SS-SB3-12_0205 / SS-SB3X-12_0205   | 5.32 U  | 1.2U | 128.54 U | 8.4J | 25802.61 | 24000 | 7.96 U | 6.5J | 511.09    | 460   |
| SS-SB6-13_0205 / SS-SB6X-13_0205   | 6.26 U  | 5.8  | 148.1 U  | 12J  | 40045.11 | 47000 | 11.46  | 18J  | 98.32     | 960   |
| SS-SB6-913_0205                    | 6.26 U  | 7.6  | 148.1 U  | 9.7J | 40045.11 | 49000 | 11.46  | 21J  | 98.32     | 1300  |
| SS-SB1-14_0205 / SS-SB1X-14_0205   | 6.04 U  | R    | 128.04 U | 19J  | 29409.07 | 36000 | 14.56  | 13J  | 105.56    | 100J  |
| SS-SB3-14_0205 / SS-SB3X-14_0205   | 5.74 U  | 2.9J | 130.91 U | 13J  | 21480.56 | 15000 | 8.75   | 12J  | 195.12    | 320J  |
| SS-SB2-15_0205 / SS-SB2X-15_0205   | 5.47 U  | UR   | 109.01 U | 10J  | 15747.55 | 25000 | 13.57  | 12J  | 64.7 U    | 170J  |
| SS-SB3-15_0205 / SS-SB3X-15_0205   | 6.58 U  | 2.7J | 170.15 U | 26J  | 59536.16 | 59000 | 18.52  | 9.7J | 1380.4    | 690J  |
| SS-SB3-915_0205                    | 6.58 U  | 1.4J | 170.15 U | 26J  | 59536.16 | 61000 | 18.52  | 17J  | 1380.4    | 1600J |
| SS-SB2-16_0205 / SS-SB2X-16_0205   | 5.65 U  | R    | 119.84 U | 16J  | 25204.59 | 34000 | 18.08  | 15J  | 74.21 U   | 75J   |
| SS-SB3-16_0205 / SS-SB3X-16_0205   | 5.39 U  | R    | 120.34 U | 2.5J | 20499.7  | 16000 | 14.47  | 8.2J | 170.14    | 150J  |
| SS-SB2-17_0205 / SS-SB2X-17_0205   | 5.96 U  | R    | 120.89 U | 8.2J | 24173.68 | 30000 | 16.03  | 12J  | 77.23 U   | 130J  |
| SS-SB3-17_0205 / SS-SB3X-17_0205   | 5.79 U  | 1.2U | 119.81 U | 7.4J | 14092.14 | 17000 | 14.6   | 3.9J | 262.71    | 350   |
| SS-SB2-18_0205 / SS-SB2X-18_0205   | 5.81 U  | 3J   | 133.48 U | 19J  | 33434.2  | 31000 | 14.21  | 11J  | 81.53 U   | 89    |
| SS-SB3-18_0205 / SS-SB3X-18_0205   | 5.65 U  | 1.3  | 128.7 U  | 5.1J | 23702.04 | 22000 | 13.24  | 12J  | 175.44    | 270   |
| SS-SB2-19_0205 / SS-SB2X-19_0205   | 6.26 U  | 2.5  | 148.1 U  | 12J  | 40045.11 | 29000 | 11.46  | 14J  | 98.32     | 81    |
| SS-SB2-20_0205 / SS-SB2X-20_0205   | 5.81 U  | R    | 126.24 U | 13J  | 22688.05 | 18000 | 11.53  | 8.1J | 74.64 U   | 54    |
| SS-SB2-21_0205 / SS-SB2X-21_0205   | 5.36 U  | 1.7  | 121.12 U | 15J  | 18809.04 | 29000 | 8.22 U | 12J  | 70.96 U   | 120   |
| SS-SB2-22_0205 / SS-SB2X-22_0205   | 5.73 U  | R    | 114.63 U | 46J  | 13661.59 | 31000 | 16.76  | 16J  | 115.51    | 210   |
| SS-SB3-22_0205 / SS-SB3X-22_0205   | 5.4 U   | R    | 116.05 U | 10J  | 16840.05 | 21000 | 11.3   | 10J  | 261.63    | 720   |
| SS-SB3-23_0205 / SS-SB3X-23_0205   | 8.5 U   | 1.4J | 159.92 U | 48J  | 14692.02 | 25000 | 13.92  | 20J  | 192.39    | 470   |
| SS-SB3-923_0205                    | 8.5 U   | R    | 159.92 U | 11J  | 14692.02 | 18000 | 13.92  | 5.2J | 192.39    | 350   |
| SS-SB3-24_0205 / SS-SB3X-24_0205   | 5.81 U  | UR   | 125.62 U | 210J | 16616.23 | 52000 | 8.81 U | 13J  | 75.82 U   | 1500J |
| SS-SB3-25_0205 / SS-SB3X-25_0205   | 5.91 U  | R    | 132.19 U | 14J  | 26798.29 | 26000 | 15.4   | 11J  | 193.19    | 860J  |
| SS-SB2-26_0205 / SS-SB2X-26_0205   | 6.2 U   | R    | 131.14 U | 30J  | 22289.26 | 30000 | 18.23  | 17J  | 183.73    | 180J  |
| SS-SB3-26_0205 / SS-SB3X-26_0205   | 6.35 U  | UR   | 255.17   | 130J | 65206.15 | 43000 | 12.39  | 12J  | 3505.25   | 690J  |
| SS-SB2-27_0205 / SS-SB2X-27_0205   | 5.45 U  | R    | 124.04 U | 24J  | 20876.7  | 31000 | 8.96   | 12J  | 152.62    | 240J  |
| SS-SB1-C12_0205 / SS-SB1X-C12_0205 | 5.97 U  | R    | 119.08 U | 12J  | 18291.93 | 15000 | 18.11  | 17J  | 68.84 U   | 41    |
| SS-SB1-C912_0205                   | 5.97 U  | 1.6  | 119.08 U | 18J  | 18291.93 | 24000 | 18.11  | 38J  | 68.84 U   | 67    |
| SS-SB1-C24_0205 / SS-SB1X-C24_0205 | 5.6 U   | R    | 116.94 U | 21J  | 8941.37  | 11000 | 8.52 U | 4.4J | 79.39     | 70    |
| SS-SB1-D23_0205 / SS-SB1X-D23_0205 | 6.5 U   | 2.7  | 181.92 U | 38J  | 58607.39 | 57000 | 11.64  | 11J  | 111.37 U  | 100   |
| SS-SB1-E12_0205 / SS-SB1X-E12_0205 | 5.42 U  | R    | 118.34 U | 17J  | 22345.86 | 25000 | 10.52  | 10J  | 67.54 U   | 48    |
| SS-SB1-F05_0205 / SS-SB1X-F05_0205 | 6.55 U  | 2.2  | 192.5 U  | 100J | 62986.09 | 47000 | 12.53  | 12J  | 115.29 U  | 98    |
| SS-SB1-F09_0205 / SS-SB1X-F09_0205 | 5.82 U  | 2    | 122.77 U | 29J  | 19086.7  | 35000 | 13.57  | 18J  | 83.36     | 140   |
| SS-SB1-H09_0205 / SS-SB1X-H09_0205 | 6.38 U  | 1.9J | 131.38 U | 22J  | 19090.71 | 32000 | 13.26  | 16J  | 78.66 U   | 260   |
| SS-SB1-H19_0205 / SS-SB1X-H19_0205 | 6.37 U  | 1.7  | 140.07 U | 16J  | 36397.09 | 19000 | 13.98  | 16J  | 90.18 U   | 450   |
| SS-SB1-J05_0205 / SS-SB1X-J05_0205 | 5.43 U  | R    | 107.81 U | 17J  | 6691.55  | 6000  | 11.04  | 7.2J | 59.34 U   | 23    |
| SS-SB1-J25_0205 / SS-SB1X-J25_0205 | 6.26 U  | 3.1  | 148.1 U  | 21J  | 40045.11 | 36000 | 11.46  | 10J  | 98.32     | 130   |

Table 5-12  
Surface Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                          | National<br>SWSV | EPA<br>Region 4<br>SWSV | North<br>Carolina<br>WQS HH | North<br>Carolina<br>WQS ECO | SS-SW/SD-01<br>Oct-02 | SS-SW/SD-02<br>Oct-02 | SS-SW/SD-03<br>Oct-02 |
|------------------------------------------|------------------|-------------------------|-----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|
| <b>Inorganic Compounds (µg/L)</b>        |                  |                         |                             |                              |                       |                       |                       |
| Aluminum                                 |                  | 87                      |                             |                              | 560                   | 230 U                 | 650                   |
| Arsenic                                  | 0.018            | 190                     | 10                          | 50                           | 5 U                   | 3.7 U                 | 3.7 U                 |
| Barium                                   |                  |                         |                             |                              | 12                    | 60                    | 19                    |
| Calcium                                  |                  |                         |                             |                              | 2500                  | 8600                  | 3100                  |
| Chromium                                 |                  | 11                      |                             | 50                           | 1.6                   | 0.8 U                 | 1                     |
| Cobalt                                   |                  |                         |                             |                              | 6.9 U                 | 3                     | 2.3                   |
| Copper                                   | 1300             | 6.54                    |                             | 7                            | 5.8 U                 | 5.3                   | 1.7                   |
| Iron                                     | 300              | 1000                    |                             | 1000                         | 630                   | 22000                 | 3000                  |
| Lead                                     |                  | 1.32                    |                             | 25                           | 2.4 U                 | 3 U                   | 3 U                   |
| Magnesium                                |                  |                         |                             |                              | 1700                  | 2000                  | 1200                  |
| Manganese                                | 50               |                         |                             |                              | 18                    | 950                   | 180                   |
| Nickel                                   | 610              | 87.71                   |                             | 88                           | 5.3 U                 | 1.9 U                 | 1.9 U                 |
| Potassium                                |                  |                         |                             |                              | 5600                  | 2100                  | 1900                  |
| Silver                                   |                  | 0.12                    |                             | 0.06                         | 1.3 U                 | 1.3                   | 0.9 U                 |
| Sodium                                   |                  |                         |                             |                              | 820 U                 | 6500                  | 6800                  |
| Vanadium                                 |                  |                         |                             |                              | 5.9 U                 | 4.5                   | 3.1                   |
| Zinc                                     | 7400             | 58.91                   |                             | 50                           | 5.5 U                 | 2.8                   | 10                    |
| <b>Pesticides/PCBs (µg/L)</b>            |                  |                         |                             |                              |                       |                       |                       |
| Aroclor-1260                             |                  | 0.014                   |                             |                              | 1.1 U                 | 1.1 U                 | 1.1 U                 |
| <b>Volatile Organic Compounds (µg/L)</b> |                  |                         |                             |                              |                       |                       |                       |
| Toluene                                  | 1300             | 175                     |                             | 11                           | 10 U                  | 10 U                  | 10 U                  |

Table 5-12  
Surface Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                          | National<br>SWSV | EPA<br>Region 4<br>SWSV | North<br>Carolina<br>WQS HH | North<br>Carolina<br>WQS ECO | SS-SW/SD-04<br>Oct-02 | SS-SW/SD-04<br>Oct-02 | SS-SW/SD-05<br>Oct-02 |
|------------------------------------------|------------------|-------------------------|-----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|
| <b>Inorganic Compounds (µg/L)</b>        |                  |                         |                             |                              |                       |                       |                       |
| Aluminum                                 |                  | 87                      |                             |                              | 2800                  | 2900                  | 690                   |
| Arsenic                                  | 0.018            | 190                     | 10                          | 50                           | 3.7 U                 | 3.7 U                 | 3.8 R                 |
| Barium                                   |                  |                         |                             |                              | 42                    | 42                    | 41                    |
| Calcium                                  |                  |                         |                             |                              | 6800                  | 7100                  | 6400                  |
| Chromium                                 |                  | 11                      |                             | 50                           | 1.8 R                 | 1.7                   | 0.8 U                 |
| Cobalt                                   |                  |                         |                             |                              | 1.2 U                 | 1.2 U                 | 1.2 U                 |
| Copper                                   | 1300             | 6.54                    |                             | 7                            | 7.3                   | 7.8                   | 3.3                   |
| Iron                                     | 300              | 1000                    |                             | 1000                         | 4300                  | 4400                  | 1500                  |
| Lead                                     |                  | 1.32                    |                             | 25                           | 3.6 U                 | 3.6 U                 | 3 U                   |
| Magnesium                                |                  |                         |                             |                              | 2400                  | 2400                  | 2100                  |
| Manganese                                | 50               |                         |                             |                              | 150                   | 160                   | 120                   |
| Nickel                                   | 610              | 87.71                   |                             | 88                           | 1.9 U                 | 2 R                   | 1.9 U                 |
| Potassium                                |                  |                         |                             |                              | 11000                 | 11000                 | 12000                 |
| Silver                                   |                  | 0.12                    |                             | 0.06                         | 0.9 U                 | 0.9 U                 | 0.9 U                 |
| Sodium                                   |                  |                         |                             |                              | 3100                  | 3100                  | 3400                  |
| Vanadium                                 |                  |                         |                             |                              | 8                     | 7.9                   | 3                     |
| Zinc                                     | 7400             | 58.91                   |                             | 50                           | 10                    | 11                    | 19                    |
| <b>Pesticides/PCBs (µg/L)</b>            |                  |                         |                             |                              |                       |                       |                       |
| Aroclor-1260                             |                  | 0.014                   |                             |                              | 1 U                   | 0.71 J                | 1.1 U                 |
| <b>Volatile Organic Compounds (µg/L)</b> |                  |                         |                             |                              |                       |                       |                       |
| Toluene                                  | 1300             | 175                     |                             | 11                           | 10 U                  | 10 U                  | 10 U                  |

Table 5-12  
Surface Water Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                          | National<br>SWSV | EPA<br>Region 4<br>SWSV | North<br>Carolina<br>WQS HH | North<br>Carolina<br>WQS ECO | SS-SW/SD-06<br>Oct-02 | SS-SW/SD-07<br>Oct-02 | SS-SW-08<br>May-04 |
|------------------------------------------|------------------|-------------------------|-----------------------------|------------------------------|-----------------------|-----------------------|--------------------|
| <b>Inorganic Compounds (µg/L)</b>        |                  |                         |                             |                              |                       |                       |                    |
| Aluminum                                 |                  | 87                      |                             |                              | 3500                  | 380 U                 | 2900               |
| Arsenic                                  | 0.018            | 190                     | 10                          | 50                           | 5 U                   | 3.7 U                 | 0.94 J             |
| Barium                                   |                  |                         |                             |                              | 28                    | 22                    | 60                 |
| Calcium                                  |                  |                         |                             |                              | 5200                  | 6400                  | 8100               |
| Chromium                                 |                  | 11                      |                             | 50                           | 4                     | 0.8 U                 | 1.7 UJ             |
| Cobalt                                   |                  |                         |                             |                              | 6.9 U                 | 1.2 U                 | 2.2                |
| Copper                                   | 1300             | 6.54                    |                             | 7                            | 5.8 U                 | 1 U                   | 1.8 UJ             |
| Iron                                     | 300              | 1000                    |                             | 1000                         | 7600                  | 1100                  | 5400               |
| Lead                                     |                  | 1.32                    |                             | 25                           | 5.4                   | 3 U                   | 3.1 J              |
| Magnesium                                |                  |                         |                             |                              | 2000                  | 2300                  | 3100 J             |
| Manganese                                | 50               |                         |                             |                              | 260                   | 29                    | 1200               |
| Nickel                                   | 610              | 87.71                   |                             | 88                           | 5.3 U                 | 1.9 U                 | 1.1                |
| Potassium                                |                  |                         |                             |                              | 12000                 | 2700                  | 12000              |
| Silver                                   |                  | 0.12                    |                             | 0.06                         | 1.3 U                 | 0.9 U                 | 1 U                |
| Sodium                                   |                  |                         |                             |                              | 2400 U                | 6000                  | 4500 J             |
| Vanadium                                 |                  |                         |                             |                              | 15                    | 2.8                   | 5.1                |
| Zinc                                     | 7400             | 58.91                   |                             | 50                           | 6.8                   | 2.9                   | 7.6 J              |
| <b>Pesticides/PCBs (µg/L)</b>            |                  |                         |                             |                              |                       |                       |                    |
| Aroclor-1260                             |                  | 0.014                   |                             |                              | 1 U                   | 1 U                   | 0.2 U              |
| <b>Volatile Organic Compounds (µg/L)</b> |                  |                         |                             |                              |                       |                       |                    |
| Toluene                                  | 1300             | 175                     |                             | 11                           | 10 U                  | 10 U                  | 0.068 J            |

Table 5-13  
Sediment Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                              | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | EPA<br>Region 4<br>SSV | SS-SW/SD-01<br>Oct-02 | SS-SW/SD-02<br>Oct-02 | SS-SW/SD-03<br>Oct-02 | SS-SW/SD-04<br>Oct-02 | SS-SW/SD-04<br>Oct-02 |
|----------------------------------------------|------------------------|--------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Inorganic Compounds (mg/kg)</b>           |                        |                          |                        |                       |                       |                       |                       |                       |
| Aluminum                                     | 7600                   |                          |                        | 11000                 | 1000                  | 2500                  | 12000                 | 15000                 |
| Arsenic                                      | 0.39                   | 4.4                      | 7.24                   | 1.3 U                 | 1 U                   | 1 U                   | 1.4 R                 | 1.8 R                 |
| Barium                                       | 540                    |                          |                        | 30                    | 12                    | 12                    | 38                    | 56                    |
| Beryllium                                    | 15                     | 30                       |                        | 0.41                  | 0.13 U                | 0.22 U                | 0.26 U                | 0.36                  |
| Calcium                                      |                        |                          |                        | 200                   | 200                   | 270                   | 520                   | 570                   |
| Chromium                                     | 30                     | 30                       | 52.3                   | 5.3                   | 3.1                   | 10                    | 17                    | 14                    |
| Cobalt                                       | 900                    |                          |                        | 1.7 U                 | 1.1                   | 2.9                   | 4                     | 3                     |
| Copper                                       | 310                    | 620                      | 18.7                   | 2.3 J                 | 2.1 UJ                | 5.9 UJ                | 13 J                  | 13 J                  |
| Iron                                         | 2300                   |                          |                        | 7700                  | 6000                  | 9300                  | 17000                 | 17000                 |
| Lead                                         | 400                    | 400                      | 30.2                   | 6.2                   | 0.83 U                | 4.9                   | 13                    | 16                    |
| Magnesium                                    |                        |                          |                        | 890                   | 340                   | 220                   | 440                   | 500                   |
| Manganese                                    | 180                    | 360                      |                        | 40                    | 88                    | 64                    | 160                   | 170                   |
| Nickel                                       | 160                    | 320                      | 15.9                   | 2.2                   | 0.57 R                | 2.5                   | 2.4                   | 3.6                   |
| Potassium                                    |                        |                          |                        | 870                   | 280                   | 210                   | 580                   | 610                   |
| Selenium                                     | 39                     | 78                       |                        | 1.1 U                 | 0.94 UJ               | 0.96 UJ               | 1 UJ                  | 1.5 J                 |
| Silver                                       | 39                     | 78                       | 2                      | 0.33 U                | 0.25 U                | 0.25 U                | 0.37                  | 0.34 U                |
| Sodium                                       |                        |                          |                        | 200                   | 380                   | 410                   | 680                   | 160                   |
| Thallium                                     | 0.52                   | 1.04                     |                        | 1.5 U                 | 1.7 U                 | 1.8 R                 | 3.3                   | 2.9                   |
| Vanadium                                     | 78                     | 15.6                     |                        | 25                    | 6.2                   | 17                    | 44                    | 45                    |
| Zinc                                         | 2300                   | 4600                     | 124                    | 7.4 J                 | 4.4 J                 | 20 J                  | 23 J                  | 32 J                  |
| <b>Extractable Organic Compounds (ug/kg)</b> |                        |                          |                        |                       |                       |                       |                       |                       |
| bis(2-Ethylhexyl)phthalate                   | 35000                  | 35000                    | 182                    | 330 UJ                | 330 U                 | 330 UJ                | 330 UJ                | 330 UJ                |
| HEXADECANOIC ACID                            |                        |                          |                        |                       |                       |                       | 120 NJ                |                       |
| TETRADECANOIC ACID                           |                        |                          |                        |                       |                       |                       |                       |                       |
| <b>Pesticides/PCBs (ug/kg)</b>               |                        |                          |                        |                       |                       |                       |                       |                       |
| 4,4'-DDD                                     | 2400                   | 2400                     | 3.3                    | 4.5 U                 | 4.2 U                 | 4.3 U                 | 4.2 U                 | 4.5 U                 |
| 4,4'-DDT                                     | 1700                   | 1700                     | 3.3                    | 4.5 U                 | 4.2 U                 | 4.3 U                 | 4.2 U                 | 4.5 U                 |
| alpha-Chlordane                              |                        |                          |                        | 2.3 U                 | 2.2 U                 | 2.2 U                 | 2.2 U                 | 2.3 U                 |
| Aroclor-1016                                 | 390                    | 1000                     | 33                     | 45 U                  | 42 U                  | 43 U                  | 42 U                  | 45 U                  |
| Benzo(a)anthracene                           | 620                    | 620                      | 330                    | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 |
| Benzo(a)pyrene                               | 62                     | 62                       | 330                    | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 |
| Chrysene                                     | 62000                  | 62000                    | 330                    | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 |
| Fluoranthene                                 | 230000                 | 460000                   | 330                    | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 | 1.4 J                 |
| Phenanthrene                                 |                        |                          | 330                    | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 | 8.3 U                 |
| Pyrene                                       | 230000                 | 460000                   | 330                    | 8.3 U                 | 8.3 U                 | 2.3 J                 | 8.3 U                 | 8.3 U                 |
| <b>Volatile Organic Compounds (ug/kg)</b>    |                        |                          |                        |                       |                       |                       |                       |                       |
| 4-Methyl-2-pentanone                         | 530000                 | 1060000                  |                        | 14 U                  | 11 U                  | 12 U                  | 11 U                  | 11 U                  |
| Acetone                                      | 1400000                | 2800000                  |                        | 14 U                  | 65 J                  | 20 U                  | 39 U                  | 27 U                  |
| Methyl Acetate                               | 2200000                |                          |                        | 14 U                  | 4 J                   | 3 J                   | 31                    | 16                    |

Table 5-13  
Sediment Analytical Results  
Sigmon's Septic Tank Site  
Statesville, Iredell County, North Carolina

|                                              | EPA<br>Region 9<br>PRG | North<br>Carolina<br>SRG | EPA<br>Region 4<br>SSV | SS-SW/SD-05<br>Oct-02 | SS-SW/SD-06<br>Oct-02 | SS-SW/SD-07<br>Oct-02 | SS-SD-08<br>May-04 | SS-SD-09<br>May-04 | SS-SD-10<br>May-04 | SS-SD-11<br>May-04 |
|----------------------------------------------|------------------------|--------------------------|------------------------|-----------------------|-----------------------|-----------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Inorganic Compounds (mg/kg)</b>           |                        |                          |                        |                       |                       |                       |                    |                    |                    |                    |
| Aluminum                                     | 7600                   |                          |                        | 13000                 | 11000                 | 9800                  | 6600               | 2800               | 9900               | 3600               |
| Arsenic                                      | 0.39                   | 4.4                      | 7.24                   | 1.2 R                 | 1.6                   | 1.3 U                 | 0.94 UJ            | 1.2 UR             | 1.3 UR             | 1.2 UR             |
| Barium                                       | 540                    |                          |                        | 42                    | 27                    | 24                    | 42 J               | 23 J               | 110 J              | 22 J               |
| Beryllium                                    | 15                     | 30                       |                        | 0.19 U                | 0.39 U                | 0.52 U                | 0.39 J             | 0.35 J             | 2.2                | 0.3 J              |
| Calcium                                      |                        |                          |                        | 590                   | 250                   | 210                   | 300 J              | 86 J               | 930                | 160 J              |
| Chromium                                     | 30                     | 30                       | 52.3                   | 7.6                   | 20                    | 28                    | 5 J                | 2.2 J              | 15 J               | 9 J                |
| Cobalt                                       | 900                    |                          |                        | 3.9                   | 1.8 U                 | 5.4                   | 4.5 J              | 1.2 J              | 8.4 J              | 2.5 J              |
| Copper                                       | 310                    | 620                      | 18.7                   | 8.8 J                 | 5.9 J                 | 9.9 J                 | 3.7 J              | 3.3                | 7.8                | 3                  |
| Iron                                         | 2300                   |                          |                        | 15000                 | 8400                  | 20000                 | 7300 J             | 3800 J             | 20000 J            | 4000 J             |
| Lead                                         | 400                    | 400                      | 30.2                   | 16                    | 8.9                   | 22                    | 4.5                | 2                  | 11                 | 2.9                |
| Magnesium                                    |                        |                          |                        | 1700                  | 240                   | 500                   | 700 J              | 720 J              | 5300 J             | 180 J              |
| Manganese                                    | 180                    | 360                      |                        | 210                   | 46                    | 110                   | 400 J              | 61 J               | 530 J              | 99 J               |
| Nickel                                       | 160                    | 320                      | 15.9                   | 2.9                   | 2.3                   | 4.2                   | 1.5 UJ             | 0.79 UJ            | 7.3 J              | 2.3 UJ             |
| Potassium                                    |                        |                          |                        | 2200                  | 370                   | 510                   | 700 J              | 810 J              | 5600 J             | 160 J              |
| Selenium                                     | 39                     | 78                       |                        | 1.1 UJ                | 1.1 U                 | 1.1 U                 | 5.7 UJ             | 4.4 UJ             | 1.5 UJ             | 4.1 UJ             |
| Silver                                       | 39                     | 78                       | 2                      | 0.29 U                | 0.33 U                | 0.34 U                | 1.6 U              | 0.22 UJ            | 0.77 UJ            | 1.2 U              |
| Sodium                                       |                        |                          |                        | 600                   | 220                   | 220                   | 37 J               | 620 U              | 39 J               | 28 J               |
| Thallium                                     | 0.52                   | 1.04                     |                        | 1.9 U                 | 1.1 U                 | 1.1 U                 | 4.1 UR             | 3.1 UR             | 3.3 UR             | 2.9 UR             |
| Vanadium                                     | 78                     | 15.6                     |                        | 34                    | 87                    | 57                    | 16                 | 8.2                | 22                 | 14                 |
| Zinc                                         | 2300                   | 4600                     | 124                    | 27 J                  | 5.7 J                 | 15 J                  | 17 J               | 6 UJ               | 60 J               | 5.7 UJ             |
| <b>Extractable Organic Compounds (ug/kg)</b> |                        |                          |                        |                       |                       |                       |                    |                    |                    |                    |
| bis(2-Ethylhexyl)phthalate                   | 35000                  | 35000                    | 182                    | 510 J                 | 330 U                 | 330 U                 | 460 U              | 420 U              | 410 U              | 490 U              |
| HEXADECANOIC ACID                            |                        |                          |                        |                       |                       |                       |                    |                    |                    |                    |
| TETRADECANOIC ACID                           |                        |                          |                        | 190 NJ                |                       |                       |                    |                    |                    |                    |
| <b>Pesticides/PCBs (ug/kg)</b>               |                        |                          |                        |                       |                       |                       |                    |                    |                    |                    |
| 4,4'-DDD                                     | 2400                   | 2400                     | 3.3                    | 5.1 U                 | 4.2 U                 | 6.1                   | 4.6 U              | 4.2 U              | 4 U                | 4.9 U              |
| 4,4'-DDT                                     | 1700                   | 1700                     | 3.3                    | 5.1 U                 | 4.2 U                 | 4.2 U                 | 18                 | 4.2 U              | 4 U                | 4.9 U              |
| alpha-Chlordane                              |                        |                          |                        | 5.2                   | 2.2 U                 | 3.2                   | 2.4 U              | 2.2 U              | 2.1 U              | 2.5 U              |
| Aroclor-1016                                 | 390                    | 1000                     | 33                     | 51 U                  | 42 U                  | 42 U                  | 46 U               | 42 U               | 40 U               | 49 U               |
| Benzo(a)anthracene                           | 620                    | 620                      | 330                    | 3.9 J                 | 8.3 U                 | 4.2 J                 |                    |                    |                    |                    |
| Benzo(a)pyrene                               | 62                     | 62                       | 330                    | 4.3 J                 | 8.3 U                 | 1.9 J                 |                    |                    |                    |                    |
| Chrysene                                     | 62000                  | 62000                    | 330                    | 5.6 J                 | 8.3 U                 | 11                    |                    |                    |                    |                    |
| Fluoranthene                                 | 230000                 | 460000                   | 330                    | 7.8                   | 1.5 J                 | 4.6 J                 |                    |                    |                    |                    |
| Phenanthrene                                 |                        |                          | 330                    | 4.3 J                 | 8.3 U                 | 4 J                   |                    |                    |                    |                    |
| Pyrene                                       | 230000                 | 460000                   | 330                    | 6.2 J                 | 8.3 U                 | 8.1                   |                    |                    |                    |                    |
| <b>Volatile Organic Compounds (ug/kg)</b>    |                        |                          |                        |                       |                       |                       |                    |                    |                    |                    |
| 4-Methyl-2-pentanone                         | 530000                 | 1060000                  |                        | 2 J                   | 11 U                  | 13 U                  | 16 U               | 13 U               | 12 U               | 21 U               |
| Acetone                                      | 1400000                | 2800000                  |                        | 88 J                  | 38 U                  | 13 U                  | 16 U               | 13 U               | 12 U               | 21 U               |
| Methyl Acetate                               | 2200000                |                          |                        | 100                   | 14                    | 13 U                  | 16 U               | 13 U               | 12 U               | 21 U               |

**Table 5-14**  
**Proposed Sample Codes, Descriptions, Locations, Rationale, and Analyses**  
**February 2005 Field Investigation**  
**Sigmon's Septic Tank Service Site**  
**Statesville, Iredell County, North Carolina**

| <b>Sample Code</b>                                                                | <b>Sample Description</b>                         | <b>Sample Location</b>                                                     | <b>Rationale</b>                                                                                                                                                                                                                                                    | <b>Analyses</b>                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SS-SF-5D through SS-SF-24I (56 locations)                                         | Surface soil (56 locations)                       | See Figure 3-1 within dashed line                                          | Samples collected from 2500 foot by 1000 foot grid (at 100 foot spacing) to fully delineate surface soil contamination on and directly adjacent to the Former Sigmons Property.                                                                                     | XRF field sampling & Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals. TEF-2,3,7,8 TCDD for 12 samples.                                         |
| SS-SF-1A through SS-SF-25J (excluding those listed above)                         | Surface soil (69 locations)                       | See Figure 3-1 outside of dashed line                                      | Samples collected from 2500 foot by 1000 foot grid (at 100 foot spacing) to delineate surface soil off of the Former Sigmons Property.                                                                                                                              | XRF field sampling with 20% laboratory confirmatory samples. Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals. TEF-2,3,7,8 TCDD for 10 samples. |
| SS-SB-1A through SS-SB-25J (excluding those locations sampled within dashed line) | Shallow subsurface soil (2-4 feet) (69 locations) | See Figure 3-1 collocated with surface soil samples outside of dashed line | Collocated with surface soil samples. Will only be collected if surface soil screening sample results indicate contaminants above screening levels.                                                                                                                 | XRF field sampling with 20% laboratory confirmatory samples. Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals                                   |
| SS-SB-14 through SS-SB-27                                                         | Deep subsurface soil samples in lagoon area       | See Figure 3-1 surrounding former lagoon area.                             | New sample locations to determine lateral and vertical extent of subsurface soil contamination in lagoons. Sample depth intervals, in feet bls, will be 2-4, 5-7, 10-12, 15-17, 20-22, 25-27, 30-32. Depths may vary due to the presence of bedrock or groundwater. | XRF field sampling with 20% laboratory confirmatory samples. Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals                                   |

**Table 5-14**  
**Proposed Sample Codes, Descriptions, Locations, Rationale, and Analyses**  
**February 2005 Field Investigation**  
**Sigmon's Septic Tank Service Site**  
**Statesville, Iredell County, North Carolina**

| Sample Code | Sample Description                          | Sample Location                             | Rationale                                                                                                                                                                                                                                                               | Analyses                                                                                                                                       |
|-------------|---------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| SS-SB-07    | Subsurface Soil at Previous Sample Location | Northeastern boundary of former lagoon area | Previously sampled to 24 feet bls; contaminants exceeded screening standards at that depth. Sample deeper to determine extend of contamination. Sample at depths of 25-27, 30-32 feet bls. Depths may vary due to presence of bedrock or groundwater.                   | XRF field sampling with 20% laboratory confirmatory samples. Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals |
| SS-SB-12    | Subsurface Soil at Previous Sample Location | Northern section of former lagoon area.     | Previously sampled to 12 feet bls; contaminants exceeded screening standards at that depth. Sample deeper to determine extend of contamination. Sample at depths of 15-17, 20-22, 25-27, 30-32 feet bls. Depths may vary due to the presence of bedrock or groundwater. | XRF field sampling with 20% laboratory confirmatory samples. Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals |
| SS-SB-13    | Subsurface Soil at Previous Sample Location | Southern section of former lagoon area      | Previously sampled to 25 feet bls; contaminants exceeded screening standards at that depth. Sample deeper to determine extend of contamination. Sample at depths of 25-27, 30-32 feet bls. Depths may vary due to the presence of bedrock or groundwater.               | XRF field sampling with 20% laboratory confirmatory samples. Laboratory samples analyzed for Volatiles, Semivolatiles, Pesticides/PCBs, Metals |
| SS-SF-01BG  | Surface soil                                | Adjacent to SS-MW-10B                       | Background sample.                                                                                                                                                                                                                                                      | Volatiles, Semivolatiles, Pesticides/PCBs, Metals, TEF-2,3,7,8 TCDD                                                                            |
| SS-SB-01BG  | Subsurface soil                             | Collocated with SS-SF-BG01                  | Sample at 2-4 ft bls. Background sample for subsurface soil.                                                                                                                                                                                                            | Volatiles, Semivolatiles, Pesticides/PCBs, Metals                                                                                              |

Notes: MW - Monitoring well (permanent)      BG - Background  
PW - Potable well sample      SS - Sigmon's Septic Tank Site  
SB - Subsurface soil sample      PZ - Piezometer  
SF - Surface soil sample

**Table 5-15**  
**Summary of Nature of Contamination in SSTS Media**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Detected Analyte                         | MW | PP | TW | PW | SS | SB | SW | SD |
|------------------------------------------|----|----|----|----|----|----|----|----|
| <b><u>Inorganics</u></b>                 |    |    |    |    |    |    |    |    |
| Aluminum (HHRA COC)                      | √√ | √√ | √√ | √  | √√ | √  | √√ | √√ |
| Arsenic (HHRA COC)                       | √√ | √√ |    | √√ | √√ |    |    | √√ |
| Barium (HHRA COC)                        | √√ | √  | √  | √  | √√ | √  | √  | √  |
| Beryllium                                | √  | √  | √  | √  | √  | √  |    | √  |
| Cadmium                                  | √  |    |    |    | √  | √  |    |    |
| Calcium                                  | √√ | √√ | √√ | √√ | √√ | √  | √  | √  |
| Chromium (HHRA COC)                      | √√ | √  | √√ |    | √√ |    | √  | √  |
| Cobalt                                   | √  | √  | √  | √  | √  | √  | √  | √  |
| Copper                                   | √  | √  | √  | √√ | √  | √  | √√ | √  |
| Iron (HHRA COC)                          | √√ | √√ | √√ | √  | √√ |    | √√ | √√ |
| Lead                                     | √√ | √  | √  | √√ | √  |    | √√ | √  |
| Magnesium                                | √√ | √√ | √√ | √√ | √√ | √  | √  | √  |
| Manganese (HHRA COC)                     | √√ | √√ | √√ | √√ | √√ |    | √√ | √√ |
| Mercury (HHRA COC)                       | √√ |    |    | √√ | √√ | √  |    |    |
| Nickel                                   | √√ | √  | √  | √  | √  |    | √  | √  |
| Potassium                                | √√ | √√ | √√ | √√ | √√ | √  | √  | √  |
| Selenium                                 | √  |    |    | √  | √  | √  |    | √  |
| Silver                                   | √  |    |    | √  | √  | √  | √√ | √  |
| Sodium                                   | √√ | √√ | √√ | √√ | √√ | √  | √  | √  |
| Thallium                                 | √√ |    |    |    | √√ |    |    | √√ |
| Vanadium                                 | √√ | √√ | √√ | √  | √√ |    | √  | √√ |
| Zinc (HHRA COC)                          | √  | √  | √  | √√ | √  | √  |    | √  |
| <b><u>Dioxins/Furans</u></b>             |    |    |    |    |    |    |    |    |
| TEQ (TOXIC. EQUIV. VALUE, FROM I-TEF/89) |    |    |    |    | √√ |    |    |    |

**Table 5-15**  
**Summary of Nature of Contamination in SSTs Media**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Detected Analyte                            | MW | PP | TW | PW | SS | SB | SW | SD |
|---------------------------------------------|----|----|----|----|----|----|----|----|
| <b>Semivolatile Organics (Extractables)</b> |    |    |    |    |    |    |    |    |
| 1,1'-Biphenyl                               | √  |    |    |    |    | √  |    |    |
| 2-Methylnaphthalene                         | √  |    |    |    |    | √  |    |    |
| 3+4-METHYLPHENOLS                           |    |    |    |    |    | √  |    |    |
| 4-Chloroaniline                             |    |    |    |    | √  | √  |    |    |
| Acetophenone                                |    |    |    |    | √  | √√ |    |    |
| Benzaldehyde                                |    |    |    |    | √  |    |    |    |
| Benzo(a)anthracene                          |    |    |    |    | √  | √  |    | √  |
| Benzo(a)pyrene                              |    |    |    |    | √√ | √√ |    | √  |
| Benzo(b)fluoranthene                        |    |    |    |    | √  | √√ |    |    |
| Benzo(g,h,i)perylene                        |    |    |    |    | √  | √  |    |    |
| Benzo(k)fluoranthene                        |    |    |    |    | √  | √  |    |    |
| BENZOIC ACID                                |    |    |    |    | √  | √  |    |    |
| bis-(2-Ethylhexyl) phthalate                |    |    | √√ |    | √  | √  |    | √√ |
| Butylbenzylphthalate                        |    |    |    |    | √  | √  |    |    |
| Caprolactam                                 | √  |    | √  |    |    |    |    |    |
| Carbazole                                   |    |    |    |    |    | √  |    |    |
| Chrysene                                    |    |    |    |    | √  | √  |    | √  |
| Dibenz(a,h)anthracene                       |    |    |    |    |    | √√ |    |    |
| di-n-octyl phthalate                        |    |    | √  |    |    | √  |    |    |
| Fluoranthene                                |    |    |    |    | √  | √  |    | √  |
| Indeno(1,2,3-cd)pyrene                      |    |    |    |    | √  | √  |    |    |
| Naphthalene                                 | √√ |    |    |    |    | √  |    |    |
| Phenanthrene                                |    |    |    |    | √  | √  |    | √  |
| Phenol                                      |    |    |    |    |    | √  |    |    |
| Pyrene                                      |    |    |    |    | √  | √  |    | √  |

**Table 5-15**  
**Summary of Nature of Contamination in SSTS Media**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Detected Analyte       | MW | PP | TW | PW | SS | SB | SW | SD |
|------------------------|----|----|----|----|----|----|----|----|
| <b>Pesticides/PCBs</b> |    |    |    |    |    |    |    |    |
| 4,4'-DDD               |    |    |    |    |    |    |    | √√ |
| 4,4'-DDE               | √  |    |    |    | √  | √  |    |    |
| 4,4'-DDT               |    |    |    |    | √  | √  |    | √√ |
| Aldrin                 | √√ |    |    |    |    |    |    |    |
| alpha-BHC              | √√ |    | √√ | √√ |    | √  |    |    |
| alpha-Chlordane        |    |    |    |    | √  | √  |    | √  |
| Aroclor-1260           |    |    |    |    |    |    | √√ |    |
| beta-BHC               | √√ |    |    |    |    | √  |    |    |
| delta-BHC              |    |    |    | √  |    |    |    |    |
| Dieldrin               |    | √√ |    |    | √  |    |    |    |
| Endosulfan I           |    |    |    |    | √  |    |    |    |
| Endosulfan II          | √  |    |    | √  |    |    |    |    |
| Endosulfan sulfate     |    |    |    |    | √  | √  |    |    |
| Endrin aldehyde        | √√ |    |    | √√ |    |    |    |    |
| Endrin ketone          | √√ |    |    | √√ |    |    |    |    |
| gamma-BHC (Lindane)    |    |    | √  |    |    |    |    |    |
| gamma-Chlordane        | √√ | √√ |    | √√ | √  | √  |    |    |
| Heptachlor             | √√ |    |    |    | √  |    |    |    |
| Heptachlor epoxide     |    | √√ |    | √√ | √  | √  |    |    |
| Methoxychlor           | √  | √  |    |    |    |    |    |    |

**Table 5-15**  
**Summary of Nature of Contamination in SSTS Media**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Detected Analyte                | MW | PP | TW | PW | SS | SB | SW | SD |
|---------------------------------|----|----|----|----|----|----|----|----|
| <b><u>Volatile Organics</u></b> |    |    |    |    |    |    |    |    |
| 1,1-Dichloroethane              |    |    |    | √  |    | √  |    |    |
| 1,1-Dichloroethene              | √  |    |    |    |    |    |    |    |
| 1,2,4-Trichlorobenzene          |    |    |    |    |    | √  |    |    |
| 1,2,4-TRIMETHYLBENZENE          |    |    |    |    |    | √√ |    |    |
| 1,2-Dichlorobenzene             | √  |    | √  | √  |    | √  |    |    |
| 1,2-Dichloropropane             |    |    |    | √√ |    |    |    |    |
| 1,3-Dichlorobenzene             | √  |    |    |    |    | √  |    |    |
| 1,4-Dichlorobenzene             | √√ |    |    | √√ | √  | √√ |    |    |
| 2-Butanone                      |    |    | √√ |    | √  | √  |    |    |
| 2-Hexanone                      |    |    |    | √  |    | √  |    |    |
| 4-Methyl-2-pentanone            |    |    |    |    |    |    |    | √  |
| Acetone                         |    |    |    |    | √  | √  |    | √  |
| Azulene                         | √  |    |    |    |    |    |    |    |
| Benzene                         | √√ |    |    | √  |    | √  |    |    |
| Bromodichloromethane            |    |    | √√ |    |    |    |    |    |
| Bromoform                       |    |    |    | √√ |    |    |    |    |
| Carbon disulfide                |    |    |    | √  |    | √  |    |    |
| Chlorobenzene                   | √√ |    |    | √  |    | √  |    |    |
| Chloroethane                    | √  |    |    |    |    |    |    |    |
| Chloroform                      | √√ |    | √√ | √√ |    |    |    |    |
| Chloromethane                   |    |    | √  |    |    |    |    |    |
| cis-1,2-Dichloroethene          | √  |    |    | √  |    | √√ |    |    |
| Cyclohexane                     |    |    | √  |    |    | √  |    |    |
| Ethyl benzene                   | √  |    |    |    |    | √  |    |    |
| Isopropylbenzene                | √  |    |    |    |    | √  |    |    |

**Table 5-15**  
**Summary of Nature of Contamination in SSTS Media**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Detected Analyte                            | MW | PP | TW | PW | SS | SB | SW | SD |
|---------------------------------------------|----|----|----|----|----|----|----|----|
| <b><u>Volatile Organics (Continued)</u></b> |    |    |    |    |    |    |    |    |
| Methyl acetate                              |    |    |    | √  | √  | √  |    | √  |
| Methyl tert-Butyl Ether                     | √  |    |    | √  |    |    |    |    |
| Methylcyclohexane                           |    |    |    | √  |    | √  |    |    |
| Methylene chloride                          |    |    | √  |    |    |    |    |    |
| Tetrachloroethene                           |    |    |    | √√ | √  | √√ |    |    |
| Toluene                                     | √  | √  | √  |    | √  | √√ | √  |    |
| Trichloroethylene                           | √√ |    |    |    |    | √√ |    |    |
| Trichlorofluoromethane                      |    |    |    |    |    | √  |    |    |
| Xylenes (total)                             | √  | √  |    |    | √  | √√ |    |    |

**MW** = Monitoring Well Locations

**PP** = Push-Point Locations

**TW** = Temporary Monitoring Well Locations

**PW** = Potable Well Locations

**SS** = Surface Soil Locations

**SB** = Subsurface Soil Locations

**SW** = Surface Water

**SD** = Sediment

√ = Analyte was detected in at least one sample from the indicated medium.

√√ = Analyte was detected at a concentration exceeding its screening value in at least one sample from the indicated medium.

**Table 6-1**  
**Listed State and Federal Threatened and Endangered Species**  
**And Species of Special Concern in Iredell County, North Carolina**  
**Sigmon's Septic Tank Site, Iredell County, North Carolina**

| Scientific Name                             | Common Name                | Federal Status | State Status | Observed Onsite? | Onsite Habitat? |
|---------------------------------------------|----------------------------|----------------|--------------|------------------|-----------------|
| <b>FISH</b>                                 |                            |                |              |                  |                 |
| <i>Carpodacus velifer</i>                   | Highfin Carpsucker         | N              | SC           | No               | No              |
| <b>REPTILES</b>                             |                            |                |              |                  |                 |
| <i>Clemmys muhlenbergii</i>                 | Bog Turtle                 | T(S/A)         | T            | No               | No              |
| <b>INSECT</b>                               |                            |                |              |                  |                 |
| <i>Pseudiron centralis</i>                  | a mayfly                   | N              | SR           | No               | Yes             |
| <i>Homoeoneuria cahabensis</i>              | a mayfly                   | N              | SR           | No               | Yes             |
| <i>Macdunnoa brunnea</i>                    | a mayfly                   | N              | SR           | No               | Yes             |
| <b>BIRDS</b>                                |                            |                |              |                  |                 |
| <i>Coragyps atratus</i>                     | Black Vulture              | N              | SC           | No               | Yes             |
| <i>Lanius ludovicianus ludovicianus</i>     | Loggerhead Shrike          | N              | SC           | No               | Yes             |
| <b>MAMMALS</b>                              |                            |                |              |                  |                 |
| <i>Neotoma magister</i>                     | Allegheny Woodrat          | FSC            | SC           | No               | Yes             |
| <b>VASCULAR PLANTS</b>                      |                            |                |              |                  |                 |
| <i>Amorpha schwerinii</i>                   | Piedmont Indigo-bush       | N              | SR           | No               | Yes             |
| <i>Baptisia albescens</i>                   | Thin-pod White Wild Indigo | N              | SR           | No               | Yes             |
| <i>Berberis canadensis</i>                  | American Barberry          | N              | SR           | No               | Yes             |
| <i>Botrychium jenmanii</i>                  | Alabama Grape Fern         | N              | SR           | No               | Yes             |
| <i>Carex conoidea</i>                       | Cone-shaped Sedge          | N              | T            | No               | No              |
| <i>Carex projecta</i>                       | Necklace Sedge             | N              | C            | No               | No              |
| <i>Delphinium exaltatum</i>                 | Tall Larkspur              | FSC            | E-SC         | No               | Yes             |
| <i>Dodecatheon meadia</i> var <i>meadia</i> | Eastern Shooting Star      | N              | SR           | No               | Yes             |
| <i>Helenium brevifolium</i>                 | Littleleaf Sneezeweed      | N              | E            | No               | Yes             |
| <i>Helenium pinnatifidum</i>                | Dissected Sneezeweed       | N              | SR           | No               | No              |
| <i>Lotus helleri</i>                        | Carolina Birdfoot-trefoil  | FSC            | C            | No               | Yes             |
| <i>Magnolia macrophylla</i>                 | Bigleaf Magnolia           | N              | SR           | No               | Yes             |
| <i>Oenothera perennis</i>                   | Perennial Sundrops         | N              | C            | No               | Yes             |
| <i>Quercus prinoides</i>                    | Dwarf Chinquapin Oak       | N              | C            | No               | Yes             |
| <i>Sida elliotii</i>                        |                            | N              | C            | No               | No              |
| <i>Silphium connatum</i>                    | Virginia Cup-plant         | N              | SR           | No               | Yes             |
| <i>Silphium perfoliatum</i>                 | Northern Cup-plant         | N              | SR           | No               | Yes             |
| <i>Thermopsis mollis sensu stricto</i>      | Appalachian Golden-banner  | N              | SR           | No               | Yes             |
| <b>NON-VASCULAR PLANTS</b>                  |                            |                |              |                  |                 |
| <i>Rhachitheciium perpusillum</i>           | Budding Tortula            | N              | C            | No               | Yes             |

**FSC**= Federal "Species of Concern", also called "Species at Risk". Formerly defined as a taxon under consideration for which there is insufficient information to support listing; formerly designated as a Candidate 2 (C2) species.

**T(S/A)** = Threatened due to similarity of appearance

**N** = Not listed

**SC**= Defined as any species of plant in North Carolina which requires monitoring but which may be collected and sold under regulations adopted under the provisions of [the Plant Protection and Conservation Act]. Defined as any species of wild animal native or once-native to North Carolina which is determined by the Wildlife Resources Commission to require monitoring but which may be taken under regulations adopted under the provisions of this Article.

**T**= Defined as any native or once-native species of wild animal and/or resident species of plant which is likely to become an endangered species within the foreseeable future through all or significant portion of its range, or one that is designated as a threatened species pursuant to the Endangered Species Act.

**C**= Defined as a species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction.

**E**= Defined as any species or higher taxon or plant whose continued existence as a viable component of the State's flora is determined to be in jeopardy. Defined as any native or once-native species of wild animal whose continued existence as a viable component of the State's fauna is determined by the Wildlife Resources Commission to be in jeopardy or any species of wild animal determined to be an 'endangered species' pursuant to the Endangered Species Act.

**SR**= Defined as any species which are very rare in North Carolina, generally with 1-20 populations in the state, generally substantially reduced in numbers by habitat destruction. Defined as any species which has not been listed by the NC Wildlife Resources Commission as an Endangered, Threatened, or Special Concern species, but which exists in the state in small numbers and has been determined by the NC Natural Heritage Program to need monitoring.

**Table 7-1**  
**Chemicals of Concern in Soil**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Chemical                               | Minimum Concentration and Qualifier | Maximum Concentration and Qualifier | Screening Toxicity Value Region 9 PRGs | North Carolina SRG | Background and Qualifier | 2X Background | Location of Maximum Concentration | Exposure Point Concentration | Statistical Measure |
|----------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------|--------------------|--------------------------|---------------|-----------------------------------|------------------------------|---------------------|
| <b>Onsite Soil (mg/kg)</b>             |                                     |                                     |                                        |                    |                          |               |                                   |                              |                     |
| Aluminum                               | 5100                                | 72000                               | 7600                                   | --                 | 14000                    | 28000         | SS-SF-G08                         | 21822                        | 95% UCL             |
| Chromium                               | 6.2                                 | 64 J                                | 30                                     | 30                 | 7.8 J                    | 15.6          | SS-SF-H09/SS-SF-H909              | 21.7                         | 95% UCL             |
| Iron                                   | 4500                                | 82000                               | 2300                                   | --                 | 10000                    | 20000         | SS-SF-G16                         | 22048                        | 95% UCL             |
| Thallium                               | 2.2                                 | 3.6 J                               | 0.52                                   | 1.04               | ND                       | ND            | SS-SF-09                          | 1.95                         | 95% UCL             |
| Vanadium                               | 11                                  | 210                                 | 78                                     | 15.6               | 26                       | 52            | SS-SF-G16                         | 52.75                        | 95% UCL             |
| <b>Onsite Subsurface Soil (mg/kg)</b>  |                                     |                                     |                                        |                    |                          |               |                                   |                              |                     |
| Iron                                   | 15000                               | 36000                               | 10000                                  | --                 | 44000                    | 88000         | SS-SB1-13                         | 27901                        | 95% UCL             |
| <b>Offsite Soil (mg/kg)</b>            |                                     |                                     |                                        |                    |                          |               |                                   |                              |                     |
| Aluminum                               | 1000                                | 64000                               | 7600                                   | --                 | 14000                    | 28000         | SS-SF-F05                         | 20549                        | 95% UCL             |
| Chromium                               | 2.2 J                               | 80 J                                | 30                                     | 30                 | 7.8 J                    | 15.6          | SS-SF-D21                         | 20.04                        | 95% UCL             |
| Iron                                   | 3500                                | 57000                               | 2300                                   | --                 | 10000                    | 20000         | SS-SF-B25                         | 19367                        | 95% UCL             |
| Vanadium                               | 6.2                                 | 120                                 | 2300                                   | 1.04               | 26                       | 52            | SS-SF-B25                         | 47.95                        | 95% UCL             |
| <b>Offsite Subsurface Soil (mg/kg)</b> |                                     |                                     |                                        |                    |                          |               |                                   |                              |                     |
| Chromium                               | 6.3                                 | 100 J                               | 64                                     | 30                 | 25 J                     | 50            | SS-SB1-F05                        | 100                          | MAX                 |
| Iron                                   | 6000                                | 57000                               | 10000                                  | --                 | 44000                    | 88000         | SS-SB1-D23                        | 57000                        | MAX                 |
| Vanadium                               | 24                                  | 150                                 | 100                                    | 15.6               | 100                      | 200           | SS-SB1-D23                        | 150                          | MAX                 |

**Notes:**

J = The value presented is estimated.

ND = The compound was not detected in the sample.

UCL = Upper confidence limit.

MAX = Maximum detected concentration.

mg/kg = Milligrams per kilogram.

PRG = U.S. Environmental Protection Agency Region 9 Preliminary Remedial Goals for Residential (Surface Soils) and Industrial (Subsurface Soil) Soil, October 2002.

SRG = North Carolina Department of Environment and Natural Resources, Division of Waste Management, Superfund Section, Inactive Hazardous Site Program, Guidelines of Assessment and Cleanup, Table 3: Appendix A Contaminated Soil Cleanup Levels, Soil-to-Groundwater, August, 2001.

**Table 7-2**  
**Chemicals of Concern in Groundwater**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Chemical                    | Minimum Concentration and Qualifier | Maximum Concentration and Qualifier | Screening Toxicity Value Region 9 PRGs | MCL  | GWQS | Units | Background | 2X Background | Location of Maximum Concentration | Exposure Point Concentration | Units | Statistical Measure |
|-----------------------------|-------------------------------------|-------------------------------------|----------------------------------------|------|------|-------|------------|---------------|-----------------------------------|------------------------------|-------|---------------------|
| <b>Monitoring Wells</b>     |                                     |                                     |                                        |      |      |       |            |               |                                   |                              |       |                     |
| Aluminum                    | 58 J                                | 19000                               | 3600                                   | 200  | NE   | µg/L  | NE         | NE            | SS-MW-14                          | 9.579                        | mg/L  | Arithmetic Mean     |
| Arsenic                     | 4                                   | 4                                   | 0.045                                  | 10   | 50   | µg/L  | NE         | NE            | SS-MW-11C                         | 0.004                        | mg/L  | Arithmetic Mean     |
| Barium                      | 5 J                                 | 450                                 | 260                                    | 2000 | 2000 | µg/L  | NE         | NE            | SS-MW-14                          | 1.07                         | mg/L  | Arithmetic Mean     |
| Iron                        | 260 J                               | 9800 J                              | 1100                                   | 300* | 300  | µg/L  | NE         | NE            | SS-MW-14                          | 5.8                          | mg/L  | Arithmetic Mean     |
| Manganese                   | 15                                  | 19000                               | 88                                     | 50** | 50   | µg/L  | NE         | NE            | SS-MW-11C                         | 15.133                       | mg/L  | Arithmetic Mean     |
| Mercury                     | 44 J                                | 44 J                                | 0.36                                   | 2    | 1.1  | µg/L  | NE         | NE            | SS-MW-14                          | 0.044                        | mg/L  | Arithmetic Mean     |
| Vanadium                    | 1.3 J                               | 46                                  | 3.6                                    | NE   | NE   | µg/L  | NE         | NE            | SS-MW-14                          | 0.0243                       | mg/L  | Arithmetic Mean     |
| <b>Potable Well (PW-03)</b> |                                     |                                     |                                        |      |      |       |            |               |                                   |                              |       |                     |
| Mercury                     | 0.98                                | 0.98                                | 0.36                                   | 2    | 1.1  | µg/L  | NE         | NE            | SS-PW-03                          | 0.00098                      | mg/L  | MAX                 |
| <b>Potable Well (PW-10)</b> |                                     |                                     |                                        |      |      |       |            |               |                                   |                              |       |                     |
| Zinc                        | 3400 J                              | 3400 J                              | 1100                                   | 5000 | 2100 | µg/L  | NE         | NE            | SS-PW-10                          | 3.4                          | mg/L  | MAX                 |

**Notes:**  
J = The value presented is estimated.  
NE = Not established.  
MAX = Maximum detected concentration.  
µg/L = Micrograms per liter.  
mg/L = Milligrams per liter.  
GWQS = North Carolina Administrative Code: 15A NCAC 02 L. 0202 Groundwater Quality Standards.  
MCL = USEPA National Primary/Secondary Drinking Water Regulations, July 2002.  
PRG = U.S. Environmental Protection Agency Region 9 Preliminary Remedial Goals for Tap Water, October 2004.

**TABLE 7-3**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**

Sigmon's Septic Tank  
Statesville, Iredell County, North Carolina

Scenario Timeframe: Future  
Receptor Population: Construction Worker  
Receptor Age: Adult

| Medium                  | Exposure Medium       | Exposure Point                   | Chemical of Potential Concern | Carcinogenic Risk |            |               |                    | Non-Carcinogenic Hazard Risk |                          |           |            |         |                       |
|-------------------------|-----------------------|----------------------------------|-------------------------------|-------------------|------------|---------------|--------------------|------------------------------|--------------------------|-----------|------------|---------|-----------------------|
|                         |                       |                                  |                               | Ingestion         | Inhalation | Dermal        | External Radiation | Exposure Routes Total        | Primary Target Organ (s) | Ingestion | Inhalation | Dermal  | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment     | Surface Soil/Dry Sediment Onsite | Iron                          |                   |            |               |                    |                              | Liver                    | 0.24      | NA         | 0.00036 | 0.24                  |
|                         |                       |                                  | Vanadium                      |                   |            |               |                    |                              | None Reported            | 0.17      | NA         | 0.00099 | 0.17                  |
|                         |                       |                                  | Chemical Total                |                   |            |               |                    |                              | 0.4                      | NA        | 0.0014     | 0.41    |                       |
|                         |                       | Exposure Point Total             |                               |                   |            |               |                    |                              |                          |           |            |         | 0.4                   |
|                         | Exposure Medium Total |                                  |                               |                   |            |               |                    |                              |                          |           |            | 0.4     |                       |
| Soil                    | Soil                  | Subsurface Soil Onsite           | Iron                          |                   |            |               |                    |                              | Liver                    | 0.3       | NA         | 0.00046 | 0.30                  |
|                         |                       |                                  | Chemical Total                |                   |            |               |                    |                              | 0.3                      | NA        | 0.0005     | 0.30    |                       |
|                         |                       | Exposure Point Total             |                               |                   |            |               |                    |                              |                          |           |            |         | 0.30                  |
|                         | Exposure Medium Total |                                  |                               |                   |            |               |                    |                              |                          |           |            | 0.30    |                       |
| Soil/Dry Sediment Total |                       |                                  |                               |                   |            |               |                    |                              |                          |           | 0.7        |         |                       |
| Groundwater             | Groundwater           | Groundwater Tap Water            | Arsenic                       |                   |            |               |                    |                              | Skin                     | 0.13      |            |         | 0.131                 |
|                         |                       |                                  | Barium                        |                   |            |               |                    |                              | Increased Kidney Weight  | 0.15      |            |         | 0.150                 |
|                         |                       |                                  | Iron                          |                   |            |               |                    |                              | Liver                    | 0.19      |            |         | 0.189                 |
|                         |                       |                                  | Manganese                     |                   |            |               |                    |                              | CNS Effects              | 2.1       |            |         | 2.1                   |
|                         | Mercury               |                                  |                               |                   |            |               | Autoimmune Effects | 1.4                          |                          |           | 1.437      |         |                       |
| Vanadium                |                       |                                  |                               |                   |            | None Reported | 0.24               |                              |                          | 0.238     |            |         |                       |
| Chemical Total          |                       |                                  |                               |                   |            |               |                    |                              | 4.2                      |           |            | 4.2     |                       |
| Exposure Point Total    |                       |                                  |                               |                   |            |               |                    |                              |                          |           | 4.2        |         |                       |
| Exposure Medium Total   |                       |                                  |                               |                   |            |               |                    |                              |                          |           | 4.2        |         |                       |
| Groundwater Total       |                       |                                  |                               |                   |            |               |                    |                              |                          |           | 4.2        |         |                       |
| Receptor Total          |                       |                                  |                               |                   |            |               |                    |                              |                          |           | 5          |         |                       |

Total Risk Across All Media =

Total Risk Across All Media =

|                                                      |                                       |
|------------------------------------------------------|---------------------------------------|
| Total Skin Across All Media =                        | <input type="text" value="0.131"/>    |
| Total Liver Across All Media =                       | <input type="text" value="0.4250"/>   |
| Total CNS Effects Across All Media =                 | <input type="text" value="2.10000"/>  |
| Total None Reported Across All Media =               | <input type="text" value="0.40793"/>  |
| Total Increased Kidney Weight Across All Media =     | <input type="text" value="0.149800"/> |
| Total Autoimmune Effects Reported Across All Media = | <input type="text" value="1.437333"/> |
| Total NA Reported Across All Media =                 | <input type="text" value="0.298066"/> |

**TABLE 7-4**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

Scenario Timeframe: Future  
 Receptor Population: Construction Worker  
 Receptor Age: Adult

| Medium                  | Exposure Medium   | Exposure Point                    | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    |                       | Non-Carcinogenic Hazard Risk  |           |            |           |                       |
|-------------------------|-------------------|-----------------------------------|-------------------------------|-------------------|------------|--------|--------------------|-----------------------|-------------------------------|-----------|------------|-----------|-----------------------|
|                         |                   |                                   |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total | Primary Target Organ (s)      | Ingestion | Inhalation | Dermal    | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment | Surface Soil/Dry Sediment Offsite | Iron                          |                   |            |        |                    |                       | Liver                         | 0.21      | NA         | 0.00032   | 0.21                  |
|                         |                   |                                   | Vanadium                      |                   |            |        |                    |                       | None Reported                 | 0.15      | NA         | 0.0009    | 0.15                  |
|                         |                   |                                   | Chemical Total                |                   |            |        |                    |                       |                               | 0.36      | NA         | 0.0012    | 0.36                  |
|                         |                   | Exposure Point Total              |                               |                   |            |        |                    |                       |                               |           |            |           | 0.4                   |
|                         |                   | Exposure Medium Total             |                               |                   |            |        |                    |                       |                               |           |            |           | 0.4                   |
| Soil                    | Soil              | Subsurface Soil Offsite           | Chromium                      |                   |            |        |                    |                       | None Reported/Bronchioalveola | 0.11      | NA         | 0.0065    | 0.11                  |
|                         |                   |                                   | Iron                          |                   |            |        |                    |                       | Liver                         | 0.61      | 0.000026   | 0.00093   | 0.61                  |
|                         |                   |                                   | Vanadium                      |                   |            |        |                    |                       | None Reported                 | 0.48      | NA         | 0.0028269 | 0.48                  |
|                         |                   | Chemical Total                    |                               |                   |            |        |                    |                       |                               | 1.2       | 0.00003    | 0.0103    | 1.2                   |
|                         |                   | Exposure Point Total              |                               |                   |            |        |                    |                       |                               |           |            |           | 1.2                   |
| Exposure Medium Total   |                   |                                   |                               |                   |            |        |                    |                       |                               |           | 1.2        |           |                       |
| Soil/Dry Sediment Total |                   |                                   |                               |                   |            |        |                    |                       |                               |           |            |           | 2                     |
| Groundwater             | Groundwater       | Groundwater Tap Water             | Arsenic                       |                   |            |        |                    |                       | Skin                          | 0.13      |            |           | 0.13                  |
|                         |                   |                                   | Barium                        |                   |            |        |                    |                       | Increased Kidney Weight       | 0.15      |            |           | 0.15                  |
|                         |                   |                                   | Iron                          |                   |            |        |                    |                       | Liver                         | 0.19      |            |           | 0.19                  |
|                         |                   |                                   | Manganese                     |                   |            |        |                    |                       | CNS Effects                   | 2.1       |            |           | 2.1                   |
|                         |                   |                                   | Mercury                       |                   |            |        |                    |                       | Autoimmune Effects            | 1.4       |            |           | 1.4                   |
|                         |                   |                                   | Vanadium                      |                   |            |        |                    |                       | None Reported                 | 0.2       |            |           | 0.2                   |
|                         |                   | Chemical Total                    |                               |                   |            |        |                    |                       |                               | 4.2       |            |           | 4.2                   |
|                         |                   | Exposure Point Total              |                               |                   |            |        |                    |                       |                               |           |            |           | 4.2                   |
| Exposure Medium Total   |                   |                                   |                               |                   |            |        |                    |                       |                               |           | 4.2        |           |                       |
| Groundwater Total       |                   |                                   |                               |                   |            |        |                    |                       |                               |           |            | 4         |                       |
| Receptor Total          |                   |                                   |                               |                   |            |        |                    |                       |                               |           |            | 6         |                       |

Total Risk Across All Media =

Total Risk Across All Media =

6

Total Skin Across All Media =

0.131

Total Liver Across All Media =

1.0053

Total CNS Effects Across All Media =

2.10000

Total None Reported Across All Media =

0.87531

Total None Reported/Bronchioalveolar Across All Media =

0.113200

Total Increased kidney Weight Across All Media =

0.149800

Total Autoimmune Effects Reported Across All Media =

1.437333

**TABLE 7-5**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**

Sigmon's Septic Tank  
Statesville, Iredell County, North Carolina

|                      |                |
|----------------------|----------------|
| Scenario Timeframe:  | Current/Future |
| Receptor Population: | Resident       |
| Receptor Age:        | Adult          |

| Medium            | Exposure Medium         | Exposure Point                  | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    | Non-Carcinogenic Hazard Risk |                          |           |            |        |                       |
|-------------------|-------------------------|---------------------------------|-------------------------------|-------------------|------------|--------|--------------------|------------------------------|--------------------------|-----------|------------|--------|-----------------------|
|                   |                         |                                 |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total        | Primary Target Organ (s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Soil/Dry Sediment | Soil/Dry Sediment       | Surface Soi/Dry Sediment Onsite | Iron                          |                   |            |        |                    |                              | Liver                    | 0.10      |            | 0.01   | 0.11                  |
|                   |                         |                                 | Chemical Total                |                   |            |        |                    |                              | 0.10                     |           | 0.01       | 0.11   |                       |
|                   |                         | Exposure Point Total            |                               |                   |            |        |                    |                              |                          |           |            | 0.1    |                       |
|                   |                         | Exposure Medium Total           |                               |                   |            |        |                    |                              |                          |           |            | 0.1    |                       |
|                   | Soil/Dry Sediment Total |                                 |                               |                   |            |        |                    |                              |                          |           | 0.1        |        |                       |
| Groundwater       | Groundwater             | Groundwater Tap Water           | Aluminum                      |                   |            |        |                    |                              | CNS-(Developmental)      | 0.3       |            |        | 0.26                  |
|                   |                         |                                 | Arsenic                       |                   |            |        |                    |                              | Skin                     | 0.36      |            |        | 0.36                  |
|                   |                         |                                 | Barium                        |                   |            |        |                    |                              | Increased Kidney Weight  | 0.41      |            |        | 0.41                  |
|                   |                         |                                 | Iron                          |                   |            |        |                    |                              | Liver                    | 0.52      |            |        | 0.52                  |
|                   |                         |                                 | Manganese                     |                   |            |        |                    |                              | CNS Effects              | 5.8       |            |        | 5.8                   |
|                   |                         |                                 | Mercury                       |                   |            |        |                    |                              | Autoimmune Effects       | 3.96      |            |        | 3.96                  |
|                   |                         |                                 | Vanadium                      |                   |            |        |                    |                              | None Reported            | 0.66      |            |        | 0.66                  |
|                   |                         |                                 | Chemical Total                |                   |            |        |                    |                              |                          | 11.97     |            |        | 11.97                 |
|                   |                         | Exposure Point Total            |                               |                   |            |        |                    |                              |                          |           |            | 12.0   |                       |
|                   | Exposure Medium Total   |                                 |                               |                   |            |        |                    |                              |                          |           | 12.0       |        |                       |
| Groundwater Total |                         |                                 |                               |                   |            |        |                    |                              |                          | 12        |            |        |                       |
| Receptor Total    |                         |                                 |                               |                   |            |        |                    |                              |                          | 12        |            |        |                       |

Total Risk Across All Media =

Total Risk Across All Media =

12

Total Skin Across All Media =

0.36

Total Liver Across All Media =

0.63

Total CNS-(Developmental) Across All Media =

0.2586

Total CNS Effects Across All Media =

5.80000

Total None Reported Across All Media =

0.65610

Total Increased Kidney Weight Across All Media =

0.412714

Total Autoimmune Effects Reported Across All Media =

3.960000

**TABLE 7-6**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**

Sigmon's Septic Tank  
Statesville, Iredell County, North Carolina

|                      |                |
|----------------------|----------------|
| Scenario Timeframe:  | Current/Future |
| Receptor Population: | Resident       |
| Receptor Age:        | Adult          |

| Medium            | Exposure Medium | Exposure Point        | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    |                       | Non-Carcinogenic Hazard Risk |           |            |        |                       |
|-------------------|-----------------|-----------------------|-------------------------------|-------------------|------------|--------|--------------------|-----------------------|------------------------------|-----------|------------|--------|-----------------------|
|                   |                 |                       |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total | Primary Target Organ (s)     | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater       | Groundwater     | Groundwater Tap Water | Aluminum                      |                   |            |        |                    |                       | CNS-(Developmental)          | 0.3       |            |        | 0.3                   |
|                   |                 |                       | Arsenic                       |                   |            |        |                    |                       | Skin                         | 0.36      |            |        | 0.4                   |
|                   |                 |                       | Barium                        |                   |            |        |                    |                       | Increased Kidney Weight      | 0.41      |            |        | 0.4                   |
|                   |                 |                       | Iron                          |                   |            |        |                    |                       | Liver                        | 0.52      |            |        | 0.5                   |
|                   |                 |                       | Manganese                     |                   |            |        |                    |                       | CNS Effects                  | 5.8       |            |        | 5.8                   |
|                   |                 |                       | Mercury                       |                   |            |        |                    |                       | Autoimmune Effects           | 4.0       |            |        | 4.0                   |
|                   |                 |                       | Vanadium                      |                   |            |        |                    |                       | None Reported                | 0.66      |            |        | 0.7                   |
|                   |                 |                       | Chemical Total                |                   |            |        |                    |                       |                              | 11.97     |            |        | 11.97                 |
|                   |                 | Exposure Point Total  |                               |                   |            |        |                    |                       |                              |           |            | 12     |                       |
|                   |                 | Exposure Medium Total |                               |                   |            |        |                    |                       |                              |           |            | 12     |                       |
| Groundwater Total |                 |                       |                               |                   |            |        |                    |                       |                              | 12.0      |            |        |                       |
| Receptor Total    |                 |                       |                               |                   |            |        |                    |                       |                              | 12.0      |            |        |                       |

Total Risk Across All Media =

Total Risk Across All Media =

12.0

Total Skin Across All Media =

0.36

Total Liver Across All Media =

0.52

Total CNS-(Developmental) Across All Media =

0.2586

Total CNS Effects Across All Media =

5.8

Total None Reported Across All Media =

0.6561

Total Increased Kidney Weight Across All Media =

0.412714

Total Autoimmune Effects Reported Across All Media =

3.96

**TABLE 7-7**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

Scenario Timeframe: Current/Future  
 Receptor Population: Resident  
 Receptor Age: Child

| Medium                  | Exposure Medium      | Exposure Point                   | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    |                       | Non-Carcinogenic Hazard Risk |           |            |        |                       |
|-------------------------|----------------------|----------------------------------|-------------------------------|-------------------|------------|--------|--------------------|-----------------------|------------------------------|-----------|------------|--------|-----------------------|
|                         |                      |                                  |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total | Primary Target Organ (s)     | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment    | Surface Soil/Dry Sediment Onsite | Aluminum                      |                   |            |        |                    |                       | CNS-(Developmental)          | 0.28      |            | 0.0039 | 0.29                  |
|                         |                      |                                  | Chromium                      |                   |            |        |                    |                       | None Reported                | 0.09      |            | 0.05   | 0.15                  |
|                         |                      |                                  | Iron                          |                   |            |        |                    |                       | Liver                        | 0.96      |            | 0.01   | 0.97                  |
|                         |                      |                                  | Thallium                      |                   |            |        |                    |                       | Blood                        | 0.3169    |            | 0.004  | 0.32                  |
|                         |                      |                                  | Vanadium                      |                   |            |        |                    |                       | None Reported                | 0.69      |            | 0.037  | 0.72                  |
|                         |                      |                                  | Chemical Total                |                   |            |        |                    |                       |                              | 2.3       |            | 0.11   | 2.45                  |
|                         | Exposure Point Total |                                  |                               |                   |            |        |                    |                       |                              |           | 2.4        |        |                       |
| Exposure Medium Total   |                      |                                  |                               |                   |            |        |                    |                       |                              | 2.4       |            |        |                       |
| Soil/Dry Sediment Total |                      |                                  |                               |                   |            |        |                    |                       |                              |           | 2          |        |                       |
| Groundwater             | Groundwater          | Groundwater Tap Water            | Aluminum                      |                   |            |        |                    |                       | CNS-(Developmental)          | 0.61      |            |        | 0.61                  |
|                         |                      |                                  | Arsenic                       |                   |            |        |                    |                       | Skin                         | 0.85      |            |        | 0.85                  |
|                         |                      |                                  | Barium                        |                   |            |        |                    |                       | Increased Kidney Weight      | 0.98      |            |        | 0.98                  |
|                         |                      |                                  | Iron                          |                   |            |        |                    |                       | Liver                        | 1.24      |            |        | 1.24                  |
|                         |                      |                                  | Manganese                     |                   |            |        |                    |                       | CNS Effects                  | 13.8      |            |        | 13.8                  |
|                         |                      |                                  | Mercury                       |                   |            |        |                    |                       | Autoimmune Effects           | 9.4       |            |        | 9.4                   |
|                         |                      |                                  | Vanadium                      |                   |            |        |                    |                       | None Reported                | 1.6       |            |        | 1.6                   |
|                         | Chemical Total       |                                  |                               |                   |            |        |                    | 28.4                  |                              |           | 28.4       |        |                       |
| Exposure Point Total    |                      |                                  |                               |                   |            |        |                    |                       |                              | 28.42     |            |        |                       |
| Exposure Medium Total   |                      |                                  |                               |                   |            |        |                    |                       |                              | 28.42     |            |        |                       |
| Groundwater Total       |                      |                                  |                               |                   |            |        |                    |                       |                              |           | 28.42      |        |                       |
| Receptor Total          |                      |                                  |                               |                   |            |        |                    |                       |                              |           | 30.9       |        |                       |

Total Risk Across All Media =

Total Risk Across All Media =

31

Total Skin Across All Media =

0.85

Total Liver Across All Media =

2.21

Total CNS-(Developmental) Across All Media =

0.9007

Total CNS Effects Across All Media =

13.8

Total None Reported Across All Media =

2.42358

Total Increased Kidney Weight Across All Media =

0.978286

Total Autoimmune Effects Reported Across All Media =

9.386667

Total Blood Across All Media =

0.3209

**TABLE 7-8**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

Scenario Timeframe: Current/Future  
 Receptor Population: Resident  
 Receptor Age: Child

| Medium                  | Exposure Medium   | Exposure Point                    | Chemical of Potential Concern | Carcinogenic Risk |            |               |                    |                       | Non-Carcinogenic Hazard Risk |           |            |        |                       |
|-------------------------|-------------------|-----------------------------------|-------------------------------|-------------------|------------|---------------|--------------------|-----------------------|------------------------------|-----------|------------|--------|-----------------------|
|                         |                   |                                   |                               | Ingestion         | Inhalation | Dermal        | External Radiation | Exposure Routes Total | Primary Target Organ (s)     | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment | Surface Soil/Dry Sediment Offsite | Aluminum                      |                   |            |               |                    |                       | CNS-(Developmental)          | 0.27      |            | 0.0037 | 0.27                  |
|                         |                   |                                   | Chromium                      |                   |            |               |                    |                       | None Reported                | 0.09      |            | 0.048  | 0.13                  |
|                         |                   |                                   | Iron                          |                   |            |               |                    |                       | Liver                        | 0.84      |            | 0.012  | 0.85                  |
|                         |                   |                                   | Vanadium                      |                   |            |               |                    |                       | None Reported                | 0.62      |            | 0.03   | 0.66                  |
|                         |                   |                                   | Chemical Total                |                   |            |               |                    |                       |                              | 1.8       |            | 0.10   | 1.9                   |
|                         |                   | Exposure Point Total              |                               |                   |            |               |                    |                       |                              |           |            |        | 1.9                   |
| Exposure Medium Total   |                   |                                   |                               |                   |            |               |                    |                       |                              |           | 1.9        |        |                       |
| Soil/Dry Sediment Total |                   |                                   |                               |                   |            |               |                    |                       |                              |           |            | 1.9    |                       |
| Groundwater             | Groundwater       | Groundwater Tap Water             | Aluminum                      |                   |            |               |                    |                       | CNS-(Developmental)          | 0.61      |            |        | 0.61                  |
|                         |                   |                                   | Arsenic                       |                   |            |               |                    |                       | Skin                         | 0.85      |            |        | 0.85                  |
|                         |                   |                                   | Barium                        |                   |            |               |                    |                       | Increased Kidney Weight      | 0.98      |            |        | 0.98                  |
|                         |                   |                                   | Iron                          |                   |            |               |                    |                       | Liver                        | 1.2       |            |        | 1.2                   |
|                         |                   |                                   | Manganese                     |                   |            |               |                    |                       | CNS Effects                  | 13.8      |            |        | 13.8                  |
|                         |                   | Mercury                           |                               |                   |            |               |                    | Autoimmune Effects    | 9.4                          |           |            | 9.4    |                       |
| Vanadium                |                   |                                   |                               |                   |            | None Reported | 1.6                |                       |                              | 1.6       |            |        |                       |
| Chemical Total          |                   |                                   |                               |                   |            |               |                    | 28.4                  |                              |           | 28.4       |        |                       |
| Exposure Point Total    |                   |                                   |                               |                   |            |               |                    |                       |                              |           | 28.4       |        |                       |
| Exposure Medium Total   |                   |                                   |                               |                   |            |               |                    |                       |                              |           | 28.4       |        |                       |
| Groundwater Total       |                   |                                   |                               |                   |            |               |                    |                       |                              |           |            | 28     |                       |
| Receptor Total          |                   |                                   |                               |                   |            |               |                    |                       |                              |           |            | 30     |                       |

Total Risk Across All Media =

Total Risk Across All Media =

30

Total Skin Across All Media =

0.85

Total Liver Across All Media =

2.09

Total CNS-(Developmental) Across All Media =

0.8839

Total CNS Effects Across All Media =

13.80000

Total None Reported Across All Media =

2.34668

Total Increased Kidney Weight Across All Media =

0.978286

Total Autoimmune Effects Reported Across All Media =

9.386667

**TABLE 7-9**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

Scenario Timeframe: Current/Future  
 Receptor Population: Resident  
 Receptor Age: Child

| Medium                  | Exposure Medium       | Exposure Point                    | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    | Non-Carcinogenic Hazard Risk |                          |           |            |        |                       |
|-------------------------|-----------------------|-----------------------------------|-------------------------------|-------------------|------------|--------|--------------------|------------------------------|--------------------------|-----------|------------|--------|-----------------------|
|                         |                       |                                   |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total        | Primary Target Organ (s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment     | Surface Soil/Dry Sediment Offsite | Aluminum                      |                   |            |        |                    |                              | CNS-(Developmental)      | 0.27      |            | 0.0037 | 0.27                  |
|                         |                       |                                   | Chromium                      |                   |            |        |                    |                              | None Reported            | 0.09      |            | 0.048  | 0.13                  |
|                         |                       |                                   | Iron                          |                   |            |        |                    |                              | Liver                    | 0.84      |            | 0.012  | 0.85                  |
|                         |                       |                                   | Vanadium                      |                   |            |        |                    |                              | None Reported            | 0.62      |            | 0.03   | 0.66                  |
|                         |                       |                                   | Chemical Total                |                   |            |        |                    |                              |                          | 1.8       |            | 0.10   | 1.9                   |
|                         | Exposure Point Total  |                                   |                               |                   |            |        |                    |                              |                          |           |            | 1.9    |                       |
| Exposure Medium Total   |                       |                                   |                               |                   |            |        |                    |                              |                          |           |            | 1.9    |                       |
| Soil/Dry Sediment Total |                       |                                   |                               |                   |            |        |                    |                              |                          |           |            |        | 1.9                   |
| Groundwater             | Groundwater           | Potable Well (PW-03) Tap Water    | Mercury                       |                   |            |        |                    |                              | Autoimmune Effects       | 0.209     |            |        | 0.209                 |
|                         |                       |                                   | Chemical Total                |                   |            |        |                    |                              |                          | 0.21      |            |        | 0.2                   |
|                         |                       | Exposure Point Total              |                               |                   |            |        |                    |                              |                          |           |            |        | 0.2                   |
|                         | Exposure Medium Total |                                   |                               |                   |            |        |                    |                              |                          |           |            |        | 0.2                   |
| Groundwater Total       |                       |                                   |                               |                   |            |        |                    |                              |                          |           |            |        | 0.2                   |
| Receptor Total          |                       |                                   |                               |                   |            |        |                    |                              |                          |           |            |        | 2                     |

Total Risk Across All Media =

2

Total Risk Across All Media =

2

Total Liver Across All Media =

0.85

Total CNS-(Developmental) Across All Media =

0.2708

Total None Reported Across All Media =

0.79148

Total Autoimmune Effects Reported Across All Media =

0.209067

**TABLE 7-10**  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

Scenario Timeframe: Current/Future  
 Receptor Population: Resident  
 Receptor Age: Child

| Medium                  | Exposure Medium       | Exposure Point                    | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    |                       | Non-Carcinogenic Hazard Risk |           |            |        |                       |
|-------------------------|-----------------------|-----------------------------------|-------------------------------|-------------------|------------|--------|--------------------|-----------------------|------------------------------|-----------|------------|--------|-----------------------|
|                         |                       |                                   |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total | Primary Target Organ (s)     | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment     | Surface Soil/Dry Sediment OffSite | Aluminum                      |                   |            |        |                    |                       | CNS-(Developmental)          | 0.27      |            | 0.0037 | 0.27                  |
|                         |                       |                                   | Chromium                      |                   |            |        |                    | None Reported         | 0.09                         |           | 0.048      | 0.13   |                       |
|                         |                       |                                   | Iron                          |                   |            |        |                    | Liver                 | 0.84                         |           | 0.0116     | 0.85   |                       |
|                         |                       |                                   | Vanadium                      |                   |            |        |                    | None Reported         | 0.62                         |           | 0.03       | 0.66   |                       |
|                         |                       |                                   | Chemical Total                |                   |            |        |                    |                       | 1.8                          |           | 0.1        | 1.9    |                       |
|                         |                       | Exposure Point Total              |                               |                   |            |        |                    |                       |                              |           | 2          |        |                       |
|                         | Exposure Medium Total |                                   |                               |                   |            |        |                    |                       |                              | 2         |            |        |                       |
| Soil/Dry Sediment Total |                       |                                   |                               |                   |            |        |                    |                       |                              |           |            | 2      |                       |
| Groundwater             | Groundwater           | Potable Well (PW-10)              | Zinc                          |                   |            |        |                    |                       | ESOD (Blood)                 | 0.73      |            |        | 0.73                  |
|                         |                       | Tap Water                         |                               |                   |            |        |                    |                       |                              |           |            |        |                       |
|                         |                       | Chemical Total                    |                               |                   |            |        |                    |                       | 0.73                         |           |            | 0.73   |                       |
|                         | Exposure Point Total  |                                   |                               |                   |            |        |                    |                       |                              |           | 0.7        |        |                       |
| Exposure Medium Total   |                       |                                   |                               |                   |            |        |                    |                       |                              |           |            | 0.7    |                       |
| Groundwater Total       |                       |                                   |                               |                   |            |        |                    |                       |                              |           |            | 1      |                       |
| Receptor Total          |                       |                                   |                               |                   |            |        |                    |                       |                              |           |            | 3      |                       |

Total Risk Across All Media =

Total Risk Across All Media =

3

Total Liver Across All Media =

0.85

Total CNS-(Developmental) Across All Media =

0.2708

Total ESOD (Blood) Across All Media =

0.7253333

Total None Reported Across All Media =

0.79148

TABLE 7-11  
**RISK CHARACTERIZATION SUMMARY - NON-CARCINOGENS**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

Scenario Timeframe: Current/Future  
 Receptor Population: Resident  
 Receptor Age: Child

| Medium                  | Exposure Medium   | Exposure Point                    | Chemical of Potential Concern | Carcinogenic Risk |            |        |                    |                       | Non-Carcinogenic Hazard Risk |           |            |        |                       |
|-------------------------|-------------------|-----------------------------------|-------------------------------|-------------------|------------|--------|--------------------|-----------------------|------------------------------|-----------|------------|--------|-----------------------|
|                         |                   |                                   |                               | Ingestion         | Inhalation | Dermal | External Radiation | Exposure Routes Total | Primary Target Organ (s)     | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Soil/Dry Sediment       | Soil/Dry Sediment | Surface Soil/Dry Sediment Offsite | Aluminum                      |                   |            |        |                    |                       | CNS-(Developmental)          | 0.27      |            | 0.0037 | 0.27                  |
|                         |                   |                                   | Chromium                      |                   |            |        |                    |                       | None Reported                | 0.09      |            | 0.048  | 0.13                  |
|                         |                   |                                   | Iron                          |                   |            |        |                    |                       | Liver                        | 0.84      |            | 0.012  | 0.85                  |
|                         |                   |                                   | Vanadium                      |                   |            |        |                    |                       | None Reported                | 0.62      |            | 0.03   | 0.66                  |
|                         |                   |                                   | Chemical Total                |                   |            |        |                    |                       |                              | 1.8       |            | 0.1    | 1.9                   |
|                         |                   |                                   | Exposure Point Total          |                   |            |        |                    |                       |                              |           |            |        | 2                     |
|                         |                   | Exposure Medium Total             |                               |                   |            |        |                    |                       |                              |           |            |        | 2                     |
| Soil/Dry Sediment Total |                   |                                   |                               |                   |            |        |                    |                       |                              |           |            |        | 2                     |
| Receptor Total          |                   |                                   |                               |                   |            |        |                    |                       |                              |           |            |        | 2                     |

Total Risk Across All Media =

Total Risk Across All Media =

Total Liver Across All Media =

Total CNS-(Developmental) Across All Media =

Total None Reported Across All Media =

**TABLE 7-12**  
**RISK-BASED REMEDIAL GOAL OPTIONS**  
**CONSTRUCTION WORKER - SURFACE SOIL/SUBSURFACE SOIL (mg/kg)**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

| CHEMICAL | HAZARD INDEX |        |         | CARCINOGENIC RISK |      |      | ARARs          |
|----------|--------------|--------|---------|-------------------|------|------|----------------|
|          |              |        |         |                   |      |      | NCDENR<br>SRGs |
|          | 0.1          | 1      | 3       | 10-6              | 10-5 | 10-4 |                |
| Chromium | 85.8         | 858    | 2,754   | --                | --   | --   | 44             |
| Iron     | 9,173        | 91,729 | 275,187 | --                | --   | --   | NE             |
| Vanadium | 30.8         | 308    | 924     | --                | --   | --   | 15.6           |

Notes:

Appropriate or relevant and applicable requirements (ARARs)

NCDENR Division of Waste Management Superfund Section Inactive Hazardous Site Branch Soil Remediation Goals, updated 2006 (NCDENR SRGs)

NE - Not Established

-- Not Applicable

**TABLE 7-13**  
**RISK-BASED REMEDIAL GOAL OPTIONS**  
**CONSTRUCTION WORKER - GROUNDWATER (mg/L)**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

| CHEMICAL  | HAZARD INDEX |      |      | CARCINOGENIC RISK |      |      | ARARs |             |
|-----------|--------------|------|------|-------------------|------|------|-------|-------------|
|           |              |      |      |                   |      |      | MCL   | NCDENR GWQS |
|           | 0.1          | 1    | 3    | 10-6              | 10-5 | 10-4 |       |             |
|           |              |      |      |                   |      |      |       |             |
| Arsenic   | 0.003        | 0.03 | 0.09 | --                | --   | --   | 0.01  | 0.05        |
| Barium    | 0.7          | 7    | 21   | --                | --   | --   | 2     | 2           |
| Iron      | 3.1          | 31   | 93   | --                | --   | --   | 0.3 * | 0.3         |
| Manganese | 0.7          | 7    | 21   | --                | --   | --   | 0.3** | 0.05        |
| Mercury   | 0.003        | 0.03 | 0.09 | --                | --   | --   | 0.002 | 0.0011      |
| Vanadium  | 0.01         | 0.1  | 0.3  | --                | --   | --   | NE    | NE          |

Notes:

Appropriate or relevant and applicable requirements (ARARs)

Maximum Contaminant Level (MCL)

NCDENR Division of Water Quality Groundwater Section Groundwater Quality Standards, 15A NCAC 02L.0202, Effective August 1, 2002 (NCDENR GWQS)

-- Not Applicable

NE Not Established

\* Secondary MCL based on aesthetics rather than on health effects.

\*\* Lifetime Health Advisory Value

**TABLE 7-14**  
**RISK-BASED REMEDIAL GOAL OPTIONS**  
**ADULT RESIDENT - SURFACE SOIL/DRY SEDIMENT (mg/kg)**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

| CHEMICAL | HAZARD INDEX |         |         | CARCINOGENIC RISK |      |      | ARARs          |
|----------|--------------|---------|---------|-------------------|------|------|----------------|
|          | 0.1          | 1       | 3       | 10-6              | 10-5 | 10-4 | NCDENR<br>SRGs |
| Iron     | 20,044       | 200,436 | 601,308 | --                | --   | --   | NE             |

Notes:

Appropriate or relevant and applicable requirements (ARARs)

NCDENR Division of Waste Management Superfund Section Inactive Hazardous Site Branch Soil Remediation Goals, updated 2006 (NCDENR SRGs)

NE - Not Established

-- Not Applicable

**TABLE 7-15**  
**RISK-BASED REMEDIAL GOAL OPTIONS**  
**ADULT RESIDENT - GROUNDWATER (mg/L)**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

| CHEMICAL  | HAZARD INDEX |      |      | CARCINOGENIC RISK |      |      | ARARs |             |
|-----------|--------------|------|------|-------------------|------|------|-------|-------------|
|           |              |      |      |                   |      |      | MCL   | NCDENR GWQS |
|           | 0.1          | 1    | 3    | 10-6              | 10-5 | 10-4 |       |             |
| Aluminum  | 3.2          | 32   | 96   | --                | --   | --   | 0.2   | NE          |
| Arsenic   | 0.001        | 0.01 | 0.03 | --                | --   | --   | 0.01  | 0.05        |
| Barium    | 0.3          | 3    | 9    | --                | --   | --   | 2     | 2           |
| Iron      | 1.1          | 11   | 33   | --                | --   | --   | 0.3 * | 0.3         |
| Manganese | 0.3          | 3    | 9    | --                | --   | --   | 0.3** | 0.05        |
| Mercury   | 0.001        | 0.01 | 0.03 | --                | --   | --   | 0.002 | 0.0011      |
| Vanadium  | 0.004        | 0.04 | 0.12 | --                | --   | --   | NE    | NE          |

**Notes:**

**Appropriate or relevant and applicable requirements (ARARs)**

Maximum Contaminant Level (MCL)

NCDENR Division of Water Quality Groundwater Section Groundwater Quality Standards, 15A NCAC 02L.0202, Effective August 1, 2002 (NCDENR GWQS)

-- Not Applicable

NE Not Established

\* Secondary MCL based on aesthetics rather than on health effects.

**\*\* Lifetime Health Advisory Value**

**TABLE 7-16**  
**RISK-BASED REMEDIAL GOAL OPTIONS**  
**CHILD RESIDENT - SURFACE SOIL/DRY SEDIMENT (mg/kg)**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

| CHEMICAL | HAZARD INDEX |        |         | CARCINOGENIC RISK |      |      | ARARs          |
|----------|--------------|--------|---------|-------------------|------|------|----------------|
|          | 0.1          | 1      | 3       | 10-6              | 10-5 | 10-4 | NCDENR<br>SRGs |
| Aluminum | 7,687        | 76,865 | 230,595 | —                 | —    | —    | NE             |
| Chromium | 15.5         | 155    | 465     | —                 | —    | —    | 44             |
| Iron     | 2,273        | 22,730 | 68,190  | —                 | —    | —    | NE             |
| Thallium | 0.6          | 6      | 18      | —                 | —    | —    | 1.04           |
| Vanadium | 7.3          | 73     | 219     | —                 | —    | —    | 15.6           |

Notes:

Appropriate or relevant and applicable requirements (ARARs)

NCDENR Division of Waste Management Superfund Section Inactive Hazardous Site Branch Soil Remediation Goals, updated 2006 (NCDENR SRGs)

NE - Not Established

— Not Applicable

**TABLE 7-17**  
**RISK-BASED REMEDIAL GOAL OPTIONS**  
**CHILD RESIDENT - GROUNDWATER (mg/L)**  
**Sigmon's Septic Tank**  
**Statesville, Iredell County, North Carolina**

| CHEMICAL  | HAZARD INDEX |       |       | CARCINOGENIC RISK |      |      | ARARs |             |
|-----------|--------------|-------|-------|-------------------|------|------|-------|-------------|
|           |              |       |       |                   |      |      | MCL   | NCDENR GWQS |
|           | 0.1          | 1     | 3     | 10-6              | 10-5 | 10-4 |       |             |
| Aluminum  | 1.6          | 16    | 48    | --                | --   | --   | 0.2   | NE          |
| Arsenic   | 0.0005       | 0.005 | 0.015 | --                | --   | --   | 0.01  | 0.05        |
| Barium    | 0.1          | 1     | 3     | --                | --   | --   | 2     | 2           |
| Iron      | 0.5          | 5     | 15    | --                | --   | --   | 0.3*  | 0.3         |
| Manganese | 0.1          | 1     | 3     | --                | --   | --   | 0.3** | 0.05        |
| Mercury   | 0.11         | 1.1   | 3.3   | --                | --   | --   | 0.002 | 0.0011      |
| Vanadium  | 0.0015       | 0.015 | 0.045 | --                | --   | --   | NE    | NE          |
| Zinc      | 0.5          | 5     | 15    | --                | --   | --   | 5     | 1.05        |

Notes:

Appropriate or relevant and applicable requirements (ARARs)

Maximum Contaminant Level (MCL)

NCDENR Division of Water Quality Groundwater Section Groundwater Quality Standards, 15A NCAC 02L.0202, Effective August 1, 2002 (NCDENR GWQS)

-- Not Applicable

NE Not Established

\* Secondary MCL based on aesthetics rather than on health effects.

\*\* Lifetime Health Advisory Value

**Table 7-18**  
**Table of Applicable RGOs and Cleanup Criteria Selection**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Contaminant | Is the Contaminant a COC in this medium? |     |    | Can Contaminant Potentially Leach to GW? (1) | 2006 NC (2) SRG (mg/kg) | NC (3) Leaching (mg/kg) | EPA DAF3 (3) Leach (mg/kg) | Most Sensitive Receptor and RGO in Surface Soil |       | Most Sensitive Receptor and RGO in Subsurface Soil |       | Governing Clean-up Criterion for Soil (5) |        | Maximum Concentration | Maximum Concentration |
|-------------|------------------------------------------|-----|----|----------------------------------------------|-------------------------|-------------------------|----------------------------|-------------------------------------------------|-------|----------------------------------------------------|-------|-------------------------------------------|--------|-----------------------|-----------------------|
|             | GW                                       | SS  | SB |                                              |                         |                         |                            | Receptor                                        | RGO   | Receptor                                           | RGO   | SS                                        | SB     | SS                    | SB                    |
| Aluminum    | Yes                                      | No  | No | Yes                                          | NE                      | NE                      | 72010(4)                   | Child Resident                                  | 76865 | None                                               | NA    | 72,010                                    | 72010  | 72000                 | 84000                 |
| Arsenic     | Yes                                      | No  | No | Yes                                          | NE                      | NE                      | 4.0                        | None                                            | NA    | None                                               | NA    | 4.0                                       | 4.0    | 4.2                   | 7.6                   |
| Barium      | Yes                                      | No  | No | Yes                                          | NA                      | 848                     | 241.8                      | None                                            | NA    | None                                               | NA    | 242                                       | 242    | 560                   | 860                   |
| Chromium    | No                                       | No  | No | No                                           | 44 (see note)           | NA                      | NA                         | Child Resident                                  | 155   | Construction Worker                                | 858   | 155                                       | 858    | 80<br>(6)             | 76                    |
| Iron        | Yes                                      | No  | No | Yes                                          | NE                      | NE                      | NE                         | Child Resident                                  | 22730 | Construction Worker                                | 91729 | 22730                                     | 91729  | 82000                 | 36000                 |
| Manganese   | Yes                                      | No  | No | Yes                                          | NA                      | 65.2                    | NE                         | None                                            | NA    | None                                               | NA    | 65.2                                      | 65.2   | 770                   | 450                   |
| Mercury     | Yes                                      | No  | No | Yes                                          | NA                      | 0.015                   | NE                         | None                                            | NA    | None                                               | NA    | 0.015                                     | 0.015  | 0.75                  | 1.6                   |
| Thallium    | No                                       | No  | No | No                                           | 1.04                    | NE                      | NE                         | Child Resident                                  | 6     | None                                               | NA    | 6                                         | 6      | 3.6                   | 4.5                   |
| Vanadium    | Yes                                      | Yes | No | Yes                                          | 15.6                    | NE                      | 900                        | Child                                           | 73    | Construction Worker                                | 308   | 73                                        | 308    | 210                   | 260                   |
| Zinc        | Yes                                      | No  | No | Yes                                          | NA                      | NE                      | 1817.8                     | None                                            | NA    | None                                               | NA    | 1817.8                                    | 1817.8 | 370                   | 2100                  |

Note: The human health risk assessment was conducted in 2005, prior to 2006 North Carolina Soil Remediation Goals becoming available. When 2005 and 2006 values differed, the 2006 value was used.

NE - Not Established

NA - Not Applicable

Note: Strikeouts indicate that the particular COC/medium combination is eliminated from the need for remedial action. Shaded cells correspond to COC/medium combinations that are retained for remedial action.

(1) If a groundwater COC is not identified as a soil COC, then the soil leachability criteria apply. Conversely, if a soil COC is not also a groundwater COC, then leachability criteria do not apply.

(2) NA in this column means that a 2006 NC SRG exists; however, the contaminant is not a COC for soil exposure. Leachability criteria would apply, but not the SRG.

(3) NA in this column means that available leachability criteria values do not apply here. The contaminant is a COC in soil but not in groundwater, so leaching is not an issue.

(4) Leachability standard was calculated based on a RGO of 16 mg/L (for the child resident receptor).

(5) Soil SRG and leaching standards are compared to numbers generated in the human health risk assessment, as applicable. Selection of final cleanup criteria occurred during the risk management conference call of March 6, 2006.

(6) The maximum concentration of iron in surface soil exceeded the governing cleanup criterion; however, it exceeded that criterion in only one sample. Therefore, it was deleted as a COC.

(7) The background concentrations used are based on "similar soil" from the local NC counties.

All units are in parts per million (mg/kg)

**Table 7-18**  
**Table of Applicable RGOs and Cleanup Criteria Selection**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| COC       | Media           | Rationale for Elimination as COC                                                                                                                                                                                                   |
|-----------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aluminum  | Surface Soil    | The maximum observed concentration in surface soil was less than the risk-based RGO                                                                                                                                                |
| Aluminum  | Subsurface Soil | Only one subsurface soil sample exceeded the protection of groundwater leachability standard                                                                                                                                       |
| Arsenic   | Surface Soil    | Very few surface soil samples exceeded the protection of groundwater leachability standard and arsenic was not found in the groundwater above it's MCL                                                                             |
| Arsenic   | Subsurface Soil | Very few subsurface soil samples exceeded the protection of groundwater leachability standard and arsenic was not found in the groundwater above it's MCL                                                                          |
| Barium    | Surface Soil    | Although some surface soil samples exceeded the protection of groundwater leachability standard, barium was not found in groundwater above it's MCL                                                                                |
| Barium    | Subsurface Soil | Although some subsurface soil samples exceeded the protection of groundwater leachability standard, barium was not found in groundwater above it's MCL                                                                             |
| Chromium  | Surface Soil    | Although some surface soil samples exceeded the protection of groundwater leachability standard, chromium was not found in groundwater above it's MCL                                                                              |
| Chromium  | Subsurface Soil | The maximum observed concentration in subsurface soil was less than the risk-based RGO                                                                                                                                             |
| Iron      | Surface Soil    | Only one surface soil sample exceeded the risk-based RGO                                                                                                                                                                           |
| Iron      | Subsurface Soil | The maximum observed concentration in subsurface soil was less than the risk-based RGO                                                                                                                                             |
| Manganese | Surface Soil    | Although some surface soil samples exceeded the protection of groundwater leachability standard and it's respective MCL, EPA and State of North Carolina have agreed to monitor the concentrations of manganese in groundwater.    |
| Manganese | Subsurface Soil | Although some subsurface soil samples exceeded the protection of groundwater leachability standard and it's respective MCL, EPA and State of North Carolina have agreed to monitor the concentrations of manganese in groundwater. |
| Mercury   | Surface Soil    | Although some surface soil samples exceeded the protection of groundwater leachability standard, mercury was only found in one sample above it's respective MCL                                                                    |
| Mercury   | Subsurface Soil | Although some subsurface soil samples exceeded the protection of groundwater leachability standard, mercury was only found in one sample above it's respective MCL.                                                                |
| Thallium  | Surface Soil    | The maximum observed concentration in surface soil was less than the risk-based RGO                                                                                                                                                |
| Thallium  | Subsurface Soil | The maximum observed concentration in subsurface soil was less than the risk-based RGO                                                                                                                                             |
| Vanadium  | Subsurface Soil | The maximum observed concentration in subsurface soil was less than the risk-based RGO                                                                                                                                             |
| Zinc      | Surface Soil    | The maximum observed concentration was less than the protection of groundwater leachability standard                                                                                                                               |
| Zinc      | Subsurface Soil | Although some subsurface soil samples exceeded the protection of groundwater leachability standard, zinc was not found in groundwater above it's MCL                                                                               |

**Table 7-19**  
**Risk-Based Remedial Goal Options and ARARs**  
**Surface Soil and Subsurface Soil (mg/kg)**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Soil COCs* | Child Resident<br>Surface Soil<br>RGOs<br>(HI = 1) | Construction<br>Worker<br>Surface and<br>Subsurface Soil<br>RGOs<br>(HI = 1) | ARARs<br>NCDENR<br>SRGS |
|------------|----------------------------------------------------|------------------------------------------------------------------------------|-------------------------|
| Aluminum   | 76,565                                             | NA                                                                           | NE                      |
| Chromium   | 155                                                | 858                                                                          | 44                      |
| Iron       | 22,730                                             | 91,729                                                                       | NE                      |
| Thallium   | 6                                                  | NA                                                                           | 1.04                    |
| Vanadium   | 73                                                 | 924                                                                          | 15.6                    |

\*This table contains the RGOs for all of the chemicals of concern (COCs) in surface soil and subsurface soil. However, based on elimination procedures discussed in Section 7.6, only vanadium is the final COC in soil.

HI = Hazard Index

NA - This chemical was not a concern for this receptor.

NE - Not Established

ARARs - Appropriate or relevant and applicable requirements

NCDENR SRGs - North Carolina Department of Environment and Natural Resources, Division of Waste Management Superfund Section Inactive Hazardous Site Branch for Soil Remediation Goals, Updated 2006.

**Table 7-20**  
**Selection of Soil Screening Concentrations - Leachability Criteria**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

|                                               | EPA Region 9<br>PRGs (1) | NCDENR (2)                                     | NCDENR (3)                        |
|-----------------------------------------------|--------------------------|------------------------------------------------|-----------------------------------|
| Analytes Identified as<br>COCs in Groundwater | DAF3<br>(mg/kg)          | Soil to<br>Groundwater<br>Standards<br>(mg/kg) | Suggested by<br>NCDENR<br>(mg/kg) |
| Aluminum                                      | NE                       | NE                                             | NE                                |
| Arsenic                                       | <b>4.0</b>               | NE                                             | 26.2                              |
| Barium                                        | <b>241.8</b>             | 848                                            | NE                                |
| Iron                                          | NE                       | NE                                             | <b>151</b>                        |
| Manganese                                     | NE                       | NE                                             | <b>65.2</b>                       |
| Mercury                                       | NE                       | NE                                             | NE                                |
| Zinc                                          | <b>1817.9</b>            | NE                                             | NE                                |

NE - Not Established

(1) Source: October 2004 EPA Region 9 PRGs - Soil Screening Levels  
Soil to Groundwater

(2) Source: Groundwater Section Guidelines for the Investigation and  
Remediation of Soil and Groundwater, NCDENR, July 2000, Table 3

(3) Source: Calculated by Nile Testerman, NCDENR

Note: Selected screening concentrations are shown in bold typeface

Table 9-1

**Summary of Soil Alternatives Evaluation  
Sigmons Septic Tank Site  
Statesville, North Carolina**

| Remedial Alternative                                                                                     | Threshold Criteria                                                                                                                     |                                                                                        | Balancing Criteria                                                                                                                                                             |                                                                           |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                               |                                           |                                  |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------|
|                                                                                                          | Overall Protection of Human Health and the Environment                                                                                 | Compliance with ARARs                                                                  | Long-Term Effectiveness and Permanence                                                                                                                                         | Reduction of M/T/V Through Treatment                                      | Short-Term Effectiveness                                                                                                                                                                                                                                               | Implementability                                                                                                                                                                                                                                                                                                              |                                           | Cost Approx. Total Present Worth |
|                                                                                                          |                                                                                                                                        |                                                                                        |                                                                                                                                                                                |                                                                           |                                                                                                                                                                                                                                                                        | Technical/Engineering Considerations                                                                                                                                                                                                                                                                                          | Estimated Time for Implementation (years) |                                  |
| 1 -- No Action                                                                                           | Does not eliminate exposure pathways or reduce the level of risk. Does not limit migration of or remove contaminants.                  | Chemical-specific ARARs are not met. Location- and action-specific ARARs do not apply. | The contaminated material is a long-term impact. The remediation goals are not met.                                                                                            | No reduction of M/T/V is realized.                                        | Level D protective equipment is required during sampling.                                                                                                                                                                                                              | None                                                                                                                                                                                                                                                                                                                          | <1                                        | \$78,000                         |
| 2 --Excavation, Treatment With Solidification/ Stabilization and Onsite Disposal                         | Eliminates exposure pathways and reduces the level of risk. Removes direct exposure to contamination and eliminates further migration. | ARARs are met through excavation, onsite treatment, and onsite disposal.               | Long-term public health threats associated with surface soil are greatly reduced. Groundwater is further protected through the immobilization of the contaminants in the soil. | Reduction of mobility through treatment is realized. Volume may increase  | Level C and D protective equipment required during site activities. Excavating and grading may result in potential release of dust. Noise nuisance from use of heavy equipment                                                                                         | Treatability testing required. Available space could be a problem depending on the type of process implemented. TCLP criteria would need to be met prior to disposal. Deep excavations may require dewatering and use of sheeting/shoring.                                                                                    | 1                                         | \$2 million                      |
| 3 -- Excavation, Treatment with Solidification/Stabilization and Offsite Disposal in Subtitle D Landfill | Eliminates exposure pathways and reduces the level of risk. Removes contamination and eliminates further migration.                    | ARARs are met through excavation, onsite treatment, and offsite disposal.              | Long-term public health threats associated with surface soil are greatly reduced. Groundwater would also be protected through removal of the source contamination.             | Reduction of mobility through treatment is realized. Volume may increase. | Level C and D protective equipment required during site activities. Excavating and grading may result in potential release of dust. Noise nuisance from use of heavy equipment. Treated waste would be transported over public roads to the offsite disposal facility. | Treatability testing required. Available space could be a problem depending on the type of process implemented. TCLP criteria would need to be met prior to disposal. Deep excavations may require dewatering and use of sheeting/shoring. Treated material must meet the Waste Acceptance Criteria of the disposal facility. | 1                                         | \$2.2 million                    |

**Table 10-1**  
**Comparative Analysis of Soil Alternatives**  
**Sigmons Septic Tank Site**  
**Statesville, North Carolina**

| Remedial Alternative                                                                                            | Criteria Rating                                        |                       |                                        |                                      |                          |                  | Approximate Present Worth (\$) |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------|----------------------------------------|--------------------------------------|--------------------------|------------------|--------------------------------|
|                                                                                                                 | Overall Protection of Human Health and the Environment | Compliance with ARARs | Long-Term Effectiveness and Permanence | Reduction of M/T/V Through Treatment | Short-Term Effectiveness | Implementability |                                |
| 1 -- No Action                                                                                                  | 0                                                      | 0                     | 0                                      | 0                                    | 5                        | 5                | \$78,000                       |
| 2 -- Excavation, Onsite Treatment with Solidification/Stabilization and Onsite Disposal                         | 5                                                      | 4                     | 3                                      | 3                                    | 4                        | 3                | \$2 million                    |
| 3 -- Excavation, Onsite Treatment with Solidification/Stabilization and Offsite Disposal in Subtitle D Landfill | 5                                                      | 5                     | 5                                      | 3                                    | 3                        | 4                | \$2.2 million                  |

A ranking of "0" indicates noncompliance, while a ranking of "5" indicates complete compliance.

Table 12-1

| Alternative 1 – No Action                                                         |       | PRESENT WORTH COST |                       |                       |
|-----------------------------------------------------------------------------------|-------|--------------------|-----------------------|-----------------------|
| Site Name: Sigmons Septic Tank Site<br>Site Location: Statesville, North Carolina |       | Discount Rate: 7%  |                       |                       |
| ITEM DESCRIPTION                                                                  | UNITS | QUANTITY           | UNIT PRICE<br>DOLLARS | TOTAL COST<br>DOLLARS |
| No Action (5-Year Review)                                                         |       |                    |                       | \$0                   |
| Subtotal - Capital Cost                                                           |       |                    |                       | \$0                   |
| Contractor Fee (10% of Capital Cost)                                              |       |                    |                       | \$0                   |
| Legal Fees, Licenses & Permits (5% of Capital Cost)                               |       |                    |                       | \$0                   |
| Engineering & Administrative (15% of Capital Cost)                                |       |                    |                       | \$0                   |
| Subtotal                                                                          |       |                    |                       | \$0                   |
| Contingency (25% of Subtotal)                                                     |       |                    |                       | \$0                   |
| TOTAL CONSTRUCTION COST                                                           |       |                    |                       | \$0                   |
| PRESENT WORTH O&M COST                                                            |       |                    |                       | \$78,424              |
| TOTAL PRESENT WORTH COST                                                          |       |                    |                       | \$78,424              |

| Alternative 1 – No Action                                                         |          | OPERATION & MAINTENANCE COSTS |                       |                               |                          |                  |
|-----------------------------------------------------------------------------------|----------|-------------------------------|-----------------------|-------------------------------|--------------------------|------------------|
| Site Name: Sigmons Septic Tank Site<br>Site Location: Statesville, North Carolina |          | Discount Rate: 7%             |                       |                               |                          |                  |
| ITEM DESCRIPTION                                                                  | UNITS    | QUANTITY                      | UNIT PRICE<br>DOLLARS | TOTAL ANNUAL<br>COST, DOLLARS | OPERATION<br>TIME, YEARS | PRESENT<br>WORTH |
| 5-YEAR REVIEWS                                                                    |          |                               |                       |                               |                          |                  |
| Personnel (2-man crew @ 2 12-hour days)                                           | hours    | 48                            | \$50                  | \$480                         | 30                       | \$5,956          |
| Supplies/ Travel                                                                  | days     | 3                             | \$3,000               | \$1,800                       | 30                       | \$22,336         |
| Soil/Groundwater Sampling and Lab Testing                                         | sample   | 20                            | \$500                 | \$2,000                       | 30                       | \$24,818         |
| Report Preparation                                                                | lump sum | 1                             | \$5,000               | \$1,000                       | 6                        | \$4,767          |
| O&M SUBTOTAL                                                                      |          |                               |                       | \$5,280                       |                          | \$57,877         |
| Contractor Fee (10% of O&M cost)                                                  |          |                               |                       | \$528                         |                          | \$5,788          |
| Legal Fees, Licenses & Permits (5% of O&M Cost)                                   |          |                               |                       | \$26                          |                          | \$289            |
| CONTINGENCY (25% of Subtotal)                                                     |          |                               |                       | \$1,320                       |                          | \$14,469         |
| SUBTOTAL                                                                          |          |                               |                       | \$6,600                       |                          | \$78,424         |

**Table 12-1 (Continued)**  
**Detailed Analysis Cost Estimates Worksheets**

| Alternative 2 -- Excavation, Onsite Treatment w/ Solidification/Stabilization, and Onsite Disposal |          |          |                    | PRESENT WORTH COST |  |
|----------------------------------------------------------------------------------------------------|----------|----------|--------------------|--------------------|--|
| Site Name: Sigmons Septic Tank Site<br>Site Location: Statesville, North Carolina                  |          |          |                    | Discount Rate: 7%  |  |
| ITEM DESCRIPTION                                                                                   | UNITS    | QUANTITY | UNIT PRICE DOLLARS | TOTAL COST DOLLARS |  |
| <b>MOBILIZATION/DEMObILIZATION</b>                                                                 |          |          |                    |                    |  |
| Transport Equipment & Staff                                                                        | each     | 1        | \$100,000          | \$100,000          |  |
| Temporary Facilities                                                                               | each     | 1        | \$75,000           | \$75,000           |  |
| <b>EXCAVATION</b>                                                                                  |          |          |                    |                    |  |
| Soil Excavation - Contaminated Soil                                                                | cy       | 9,000    | \$10               | \$90,000           |  |
| Excavate Onsite Disposal Area                                                                      | cy       | 9,100    | \$10               | \$91,000           |  |
| Excavation Confirmation Testing (1 test per 100 ft <sup>2</sup> )                                  | test     | 1,089    | \$100              | \$108,900          |  |
| Dust Control & Air Monitoring                                                                      | cy       | 18,100   | \$10               | \$181,000          |  |
| Backfill Excavated Areas with Clean Fill/Treated Soil                                              | cy       | 18,100   | \$5                | \$90,500           |  |
| Place 1 foot thick layer clean fill over disposal site                                             | cy       | 2,200    | \$10               | \$22,000           |  |
| Place 6 inch top soil layer over excavated areas                                                   | cy       | 2,800    | \$20               | \$56,000           |  |
| Grading & Compacting                                                                               | acre     | 3.5      | \$5,000            | \$17,500           |  |
| Seed & Mulch                                                                                       | acre     | 3.5      | \$2,000            | \$7,000            |  |
| <b>ONSITE TREATMENT</b>                                                                            |          |          |                    |                    |  |
| Treatability Study                                                                                 | lump sum | 1        | \$50,000           | \$50,000           |  |
| Solidification/Stabilization                                                                       | ton      | 2,925    | \$30               | \$87,750           |  |
| <b>EQUIPMENT &amp; MATERIALS</b>                                                                   |          |          |                    |                    |  |
| Health & Safety Equipment                                                                          | each     | 1        | \$100,000          | \$100,000          |  |
| <b>Subtotal - Capital Cost</b>                                                                     |          |          |                    | <b>\$1,076,650</b> |  |
| <b>Contractor Fee (10% of Capital Cost)</b>                                                        |          |          |                    | <b>\$107,665</b>   |  |
| <b>Legal Fees, Licenses &amp; Permits (5% of Capital Cost)</b>                                     |          |          |                    | <b>\$53,833</b>    |  |
| <b>Engineering &amp; Administrative (15% of Capital Cost)</b>                                      |          |          |                    | <b>\$161,498</b>   |  |
| <b>Subtotal</b>                                                                                    |          |          |                    | <b>\$1,399,645</b> |  |
| <b>Contingency (25% of Subtotal)</b>                                                               |          |          |                    | <b>\$349,911</b>   |  |
| <b>TOTAL CONSTRUCTION COST</b>                                                                     |          |          |                    | <b>\$1,749,556</b> |  |
| <b>PRESENT WORTH O&amp;M COST</b>                                                                  |          |          |                    | <b>\$268,035</b>   |  |
| <b>TOTAL PRESENT WORTH COST</b>                                                                    |          |          |                    | <b>\$2,017,592</b> |  |

| Alternative 2 -- Excavation, Onsite Treatment w/ Solidification/Stabilization, and Onsite Disposal |       |          |                    | OPERATION & MAINTENANCE COSTS |                       |                  |
|----------------------------------------------------------------------------------------------------|-------|----------|--------------------|-------------------------------|-----------------------|------------------|
| Site Name: Sigmons Septic Tank Site<br>Site Location: Statesville, North Carolina                  |       |          |                    | Discount Rate: 7%             |                       |                  |
| ITEM DESCRIPTION                                                                                   | UNITS | QUANTITY | UNIT PRICE DOLLARS | TOTAL ANNUAL COST, DOLLARS    | OPERATION TIME, YEARS | PRESENT WORTH    |
| Remedy Monitoring & Five Year Review/Report                                                        | year  | 1        | \$5,280            | \$5,280                       | 30                    | \$65,520         |
| Soil Cap and Lawn Maintenance                                                                      | month | 12       | \$1,000            | \$12,000                      | 30                    | \$148,908        |
| <b>SUBTOTAL</b>                                                                                    |       |          |                    | <b>\$17,280</b>               |                       | <b>\$214,428</b> |
| <b>CONTINGENCY (25% of Subtotal)</b>                                                               |       |          |                    | <b>\$4,320</b>                |                       | <b>\$53,607</b>  |
| <b>TOTAL</b>                                                                                       |       |          |                    | <b>\$21,600</b>               |                       | <b>\$268,035</b> |

Treatability study and solidification/stabilization treatment costs are from EPA guidance, vendor-supplied information, and similar type work at other sites.  
 1 cy = 1.3 tons  
 Costs assume a 1-year treatment time frame.  
 Assumes a 5% increase in volume of soil treated via solidification/stabilization  
 Transportation and disposal costs developed from R.S. Means 1999

**Table 12-1 (Continued)**  
**Detailed Analysis Cost Estimates Worksheets**

| Alternative 3 -- Excavation, Onsite Treatment w/ Solidification/Stabilization, and Offsite Disposal |          |          |                    | PRESENT WORTH COST |  |
|-----------------------------------------------------------------------------------------------------|----------|----------|--------------------|--------------------|--|
|                                                                                                     |          |          |                    | Discount Rate: 7%  |  |
| Site Name: Sigmons Septic Tanks Site<br>Site Location: Statesville, North Carolina                  |          |          |                    |                    |  |
| ITEM DESCRIPTION                                                                                    | UNITS    | QUANTITY | UNIT PRICE DOLLARS | TOTAL COST DOLLARS |  |
| <b>MOBILIZATION/DEMOBILIZATION</b>                                                                  |          |          |                    |                    |  |
| Transport Equipment & Staff                                                                         | each     | 1        | \$100,000          | \$100,000          |  |
| Temporary Facilities                                                                                | each     | 1        | \$75,000           | \$75,000           |  |
| <b>EXCAVATION</b>                                                                                   |          |          |                    |                    |  |
| Soil Excavation - Contaminated Soil                                                                 | cy       | 9,000    | \$10               | \$90,000           |  |
| Excavation Confirmation Testing (1 test per 100 ft <sup>2</sup> )                                   | test     | 1,089    | \$100              | \$108,900          |  |
| Dust Control & Air Monitoring                                                                       | cy       | 9,000    | \$10               | \$90,000           |  |
| Backfill Excavated Areas with Clean Fill                                                            | cy       | 9,000    | \$5                | \$45,000           |  |
| Place 6 inch top soil layer over excavated areas                                                    | cy       | 1,700    | \$20               | \$34,000           |  |
| Grading & Compacting                                                                                | acre     | 2.5      | \$5,000            | \$12,500           |  |
| Seed & Mulch                                                                                        | acre     | 2.5      | \$2,000            | \$5,000            |  |
| <b>ONSITE TREATMENT</b>                                                                             |          |          |                    |                    |  |
| Treatability Study                                                                                  | lump sum | 1        | \$50,000           | \$50,000           |  |
| Solidification/Stabilization                                                                        | ton      | 2,925    | \$30               | \$87,750           |  |
| <b>OFFSITE DISPOSAL</b>                                                                             |          |          |                    |                    |  |
| Truck Transport                                                                                     | ton      | 11,846   | \$15               | \$177,694          |  |
| Disposal at Subtitle D Landfill                                                                     | ton      | 11,846   | \$30               | \$355,388          |  |
| <b>EQUIPMENT &amp; MATERIALS</b>                                                                    |          |          |                    |                    |  |
| Health & Safety Equipment                                                                           | each     | 1        | \$100,000          | \$100,000          |  |
| Subtotal - Capital Cost                                                                             |          |          |                    | \$1,331,231        |  |
| Contractor Fee (10% of Capital Cost)                                                                |          |          |                    | \$133,123          |  |
| Legal Fees, Licenses & Permits (5% of Capital Cost)                                                 |          |          |                    | \$66,562           |  |
| Engineering & Administrative (15% of Capital Cost)                                                  |          |          |                    | \$199,685          |  |
| Subtotal                                                                                            |          |          |                    | \$1,730,601        |  |
| Contingency (25% of Subtotal)                                                                       |          |          |                    | \$432,650          |  |
| <b>TOTAL CONSTRUCTION COST</b>                                                                      |          |          |                    | <b>\$2,163,251</b> |  |
| <b>PRESENT WORTH O&amp;M COST</b>                                                                   |          |          |                    | <b>\$26,243</b>    |  |
| <b>TOTAL PRESENT WORTH COST</b>                                                                     |          |          |                    | <b>\$2,189,494</b> |  |

| Alternative 3 -- Excavation, Onsite Treatment w/ Solidification/Stabilization, and Offsite Disposal |           |          |                    | OPERATION & MAINTENANCE COSTS |                       |               |
|-----------------------------------------------------------------------------------------------------|-----------|----------|--------------------|-------------------------------|-----------------------|---------------|
|                                                                                                     |           |          |                    | Discount Rate: 7%             |                       |               |
| Site Name: Sigmons Septic Tanks Site<br>Site Location: Statesville, North Carolina                  |           |          |                    |                               |                       |               |
| ITEM DESCRIPTION                                                                                    | UNITS     | QUANTITY | UNIT PRICE DOLLARS | TOTAL ANNUAL COST, DOLLARS    | OPERATION TIME, YEARS | PRESENT WORTH |
| Monitoring & Maintenance of Re-Vegetated Area                                                       | Quarterly | 4        | \$2,000            | \$8,000                       | 3                     | \$20,995      |
| <b>SUBTOTAL</b>                                                                                     |           |          |                    | \$8,000                       |                       | \$20,995      |
| <b>CONTINGENCY (25% of Subtotal)</b>                                                                |           |          |                    | \$2,000                       |                       | \$5,249       |
| <b>TOTAL</b>                                                                                        |           |          |                    | \$10,000                      |                       | \$26,243      |

Treatability study and solidification/stabilization treatment costs are from EPA guidance, vendor-supplied information, and similar type work at other sites.

1 cy = 1.3 tons

Costs assume a 1-year treatment time frame.

Assumes a 5% increase in volume of soil treated via solidification/stabilization

Transportation and disposal costs developed from R.S. Means 1999

**Table 13-1**  
**Potential Chemical-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standards, Requirements, Criteria, or Limitations       | Citation                                                       | Description                                                                                                                                                                                      | Comments                                                                                                                                                                                                                                        |
|---------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FEDERAL</b>                                          |                                                                |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                 |
| Federal Groundwater Classification                      | 55 Federal Register (FR) Part 8733                             | Federal classification system to establish groundwater usage categories for aquifers as part of a groundwater protection strategy.                                                               | The aquifer beneath the site carries a federal classification of Class I. This classification means that the surficial aquifer is a sole-source aquifer that is an irreplaceable groundwater resource and warrants a high degree of protection. |
| Safe Drinking Water Act (SDWA)                          | 40 United States Code (USC) §300                               |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                 |
| National Primary Drinking Water Standards               | 40 Code of Federal Regulations (CFR) Part 141, Subpart B and G | Established maximum contaminant levels (MCLs) which are health-based standards for public water systems.                                                                                         | The MCLs for organic constituents are relevant and appropriate to the groundwater contamination in a sole source aquifer.                                                                                                                       |
| Clean Water Act                                         | 33 USC Sect. 1251-1376                                         |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                 |
| Ambient Water Quality Criteria                          | 40 CFR Part 131                                                | Requires the states to set ambient water quality criteria (AWQC) criteria for water quality based on use classifications and the criteria developed under Section 304(a) of the Clean Water Act. | AWQCs for some inorganic and organic constituents in the groundwater at the site have been developed and may be relevant and appropriate.                                                                                                       |
| Toxic Pollutant Effluent Standards                      | 40 CFR Part 129                                                | Establishes effluent standards or prohibitions for certain toxic pollutants: aldrin/dieldrin, DDT, endrin, toxaphene, benzidine, PCBs.                                                           | Would not be applicable because this regulation does not cover contaminants detected onsite that are site-attributable or COCs.                                                                                                                 |
| National Pollutant Discharge Elimination System (NPDES) | 40 CFR Parts 122, 125                                          | Determines maximum concentrations for the discharge of pollutants from any point source into waters of the United States.                                                                        | Discharge limits would be established for effluent if discharged to surface water body on site.                                                                                                                                                 |
| National Pretreatment Standards                         | 40 CFR Part 403                                                | Sets standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works or that may contaminate sewage sludge.                            | If an alternative involved discharge to publicly owned treatment works, these standards would be applicable if discharged on site.                                                                                                              |
| Resource Conservation and Recovery Act (RCRA)           | 40 USC 6905, 6912, 6924, 6925                                  |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                 |
| RCRA Groundwater Protection                             | 40 CFR Part 264                                                | Provides for groundwater protection standards, general monitoring requirements and technical requirements.                                                                                       | The RCRA standards could be relevant and appropriate for groundwater at the site if an onsite landfill is constructed.                                                                                                                          |
| RCRA Solid Waste Disposal Facility Requirements         | 40 CFR Part 257.3-4                                            | Provides for protection of groundwater at solid waste disposal facility.                                                                                                                         | May be applicable if remedial action includes provisions for an onsite landfill.                                                                                                                                                                |

**Table 13-1**  
**Potential Chemical-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standards, Requirements, Criteria, or Limitations                              | Citation                                                          | Description                                                                                                                                                          | Comments                                                                                                                                                                                          |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clean Air Act                                                                  | 42 USC Sect. 7401-7642                                            |                                                                                                                                                                      |                                                                                                                                                                                                   |
| National Primary and Secondary Ambient Air Quality Standards                   | 40 CFR Part 50                                                    | Establishes standards for ambient air quality to protect public health and welfare.                                                                                  | May be applicable if contaminants are discharged to the air during a treatment process.                                                                                                           |
| National Emissions Standards for Hazardous Air Pollutants (NESHAPS)            | 40 CFR Part 61                                                    | Provides emissions standards for hazardous air pollutants for which no ambient air quality standard exists.                                                          | May be relevant or appropriate if onsite treatment units with emissions are part of remedial actions.                                                                                             |
| Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) | §121(d)(2)(B)(ii)                                                 | Provides alternative groundwater concentration limits for groundwater that discharges to a surface water body.                                                       | There are suspected discharges of groundwater to surface water near the site.                                                                                                                     |
| <b>STATE</b>                                                                   |                                                                   |                                                                                                                                                                      |                                                                                                                                                                                                   |
| North Carolina Hazardous Waste Management Rules and Solid Waste Management Law | 15A NCAC 13A                                                      |                                                                                                                                                                      |                                                                                                                                                                                                   |
| Identification and Listing of Hazardous Waste                                  | 15A NCAC 13A.0006                                                 | Defines those solid wastes which are subject to state regulation as a hazardous waste. Consistent with corresponding federal standards.                              | Would potentially be applicable to remedial actions involving solid waste removal.                                                                                                                |
| Water Pollution Control Regulations                                            | 15A NCAC 2B.0100                                                  | Establishes acceptable water quality-related parameters in state surface water.                                                                                      | Potentially applicable to remedial actions involving discharge of treated groundwater to Chinnis Branch.                                                                                          |
| North Carolina Drinking Water Act                                              | General Statutes of NC, Chapter 130A, Article 10                  | Establishes criteria for protection of state public water supplies. State equivalent to Federal SDWA.                                                                | The use of groundwater as a potable water supply is currently limited.                                                                                                                            |
| North Carolina Water and Air Resources Act                                     | General Statutes of NC, Chapter 143, Article 21                   |                                                                                                                                                                      |                                                                                                                                                                                                   |
| North Carolina Water Quality Standards                                         | NCAC, Title 15A, Chapter 2B                                       | Surface water quality standards for fresh and salt water bodies.                                                                                                     | Applicable for the protection of Chinnis Branch (a class C-swamp).                                                                                                                                |
| Emissions Standards for Hazardous Air Pollutants                               | NCAC Title 15A, Chapter 2, Subchapter 2D                          | Adopts by reference federal emissions standards (NESHAP) for seven contaminants - benzene, mercury, arsenic, asbestos, beryllium, vinyl chloride, and radionuclides. | Benzene is the only one of the contaminants which is of concern at the site; however, the benzene standard only applies to chemical manufacture coke byproduct and petroleum refining activities. |
| North Carolina Groundwater Quality Standard                                    | NCAC, Title 15A, Chapter 2, Subchapters 2L.0100, 2L.0200, 2L.0300 | Establishes groundwater classifications and groundwater quality standards.                                                                                           | Applicable. Presents maximum allowable concentrations for contaminants including COCs at the Potter's Pits site.                                                                                  |

**Table 13-2**  
**Potential Action-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standard, Requirement, Criteria, or Limitation                                                                    | Citation                                      | Description                                                                                                                                                                                                                                                                                  | Comments                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FEDERAL</b>                                                                                                    |                                               |                                                                                                                                                                                                                                                                                              |                                                                                                                                                    |
| Solid Waste Disposal Act                                                                                          | 40 United States Code (USC) § 6901-6987       |                                                                                                                                                                                                                                                                                              |                                                                                                                                                    |
| Criteria for Classification of Solid Waste Disposal Facilities and Practices                                      | 40 Code of Federal Regulations (CFR) Part 257 | Establishes criteria for use in determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health, and thereby constitute prohibited open dumps.                                                                                    | If an alternative involved onsite land disposal of solid waste, this part would be applicable.                                                     |
| Hazardous Waste Management Systems General                                                                        | 40 CFR Part 260                               | Establishes procedure and criteria for modification or revocation of any provision in 40 CFR Parts 260-265.                                                                                                                                                                                  | May be applicable if a substance from the site was to be excluded from the list of hazardous wastes.                                               |
| Identification and Listing of Hazardous Wastes                                                                    | 40 CFR Part 261                               | Defines those solid wastes which are subject to regulations as hazardous wastes under 40 CFR Parts 262-265 and Parts 124, 270, and 271.                                                                                                                                                      | Would be applicable in identifying if a substance at the site should be defined as a hazardous waste. Would require handling as a hazardous waste. |
| Standards Applicable to Generators of Hazardous Waste                                                             | 40 CFR Part 262                               | Establishes standards for generators of hazardous waste.                                                                                                                                                                                                                                     | If an alternative involved onsite disposal or treatment of hazardous wastes, these standards would be applicable.                                  |
| Standards Applicable to Transporters of Hazardous Waste                                                           | 40 CFR Part 263                               | Establishes standards which apply to persons transporting hazardous waste within the U.S. if the transportation requires a manifest under 40 CFR Part 262.                                                                                                                                   | If an alternative involved onsite transportation of hazardous wastes, these standards apply.                                                       |
| Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities                 | 40 CFR Part 264                               | Establishes minimum national standards which define the acceptable management of hazardous waste for owners and operators of facilities which treat, store, or dispose of hazardous waste.                                                                                                   | May be applicable or relevant and appropriate if hazardous waste will be disposed of onsite.                                                       |
| Interim Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities         | 40 CFR Part 265                               | Establishes minimum national standards which define the acceptable management of hazardous waste during the period of interim status and until certification of final closure or if the facility is subject to post-closure requirements, until post-closure responsibilities are fulfilled. | May be applicable or relevant and appropriate if hazardous waste will be disposed of onsite.                                                       |
| Standards for Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities | 40 CFR Part 266                               | Establishes requirements which apply to recyclable materials.                                                                                                                                                                                                                                | No substances are anticipated to be present at the site in quantities to warrant recycling.                                                        |

**Table 13-2**  
**Potential Action-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| <b>Standard, Requirement, Criteria, or Limitation</b>                                      | <b>Citation</b>      | <b>Description</b>                                                                                                                                                                                                                                                                      | <b>Comments</b>                                                                                                                                                         |
|--------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interim Standards for Owners and Operators of New Hazardous Waste Land Disposal Facilities | 40 CFR Part 267      | Establishes minimum national standards which define the acceptable management of hazardous waste for new land disposal facilities.                                                                                                                                                      | May be applicable or relevant and appropriate if hazardous waste will be disposed of onsite.                                                                            |
| Land Disposal                                                                              | 40 CFR Part 268      | Establishes a timetable for restriction of burial of wastes and other hazardous materials.                                                                                                                                                                                              | May be applicable or relevant and appropriate if hazardous waste will be disposed of onsite.                                                                            |
| Hazardous Waste Permit Program                                                             | 40 CFR Part 270      | Establishes provisions covering basic USEPA permitting requirements.                                                                                                                                                                                                                    | A permit is not required for onsite CERCLA response actions. Substantive requirements are addressed in 40 CFR Part 264.                                                 |
| Underground Storage Tanks                                                                  | 40 CFR Part 280      | Establishes regulations related to underground storage tanks.                                                                                                                                                                                                                           | Would be applicable if an alternative would involve use of underground storage tanks onsite.                                                                            |
| Occupational Safety and Health Act                                                         | 29 USC Sect. 651-678 |                                                                                                                                                                                                                                                                                         |                                                                                                                                                                         |
| Inspections, Citations, and Proposed Penalties                                             | 29 CFR Part 1903     | Regulates worker health and safety with regards to onsite remedial activities. Authorizes the Department of Labor to conduct inspections and to issue citations and proposed penalties for alleged violations.                                                                          | Under 40 CFR Section 300.38, requirements of the Act apply to all response activities under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). |
| Recording and Reporting Occupational Injuries and Illnesses                                | 29 CFR Part 1904     | Regulates worker health and safety with regard to onsite remedial activities. Provides for record keeping and reporting by employers.                                                                                                                                                   | Under 40 CFR Section 300.38, requirements of the Act apply to all response activities under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). |
| General Industry Standards                                                                 | 29 CFR Part 1910     | Regulates worker health and safety and regards to onsite remedial activities. Establishes generic specifications for using tools maintaining industrial structures, installing work place safety equipment, providing medical attention, and other general health and safety practices. | Under 40 CFR Section 300.38, requirements of the Act apply to all response activities under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). |
| Occupational Safety and Health Standards for the Construction Industry                     | 29 CFR Part 1926     | Regulates worker health and safety with regards to onsite remedial activity. Establishes safety and health standards for the construction industry.                                                                                                                                     | Under 40 CFR Section 300.38, requirements of the Act apply to all response activities under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). |

**Table 13-2**  
**Potential Action-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standard, Requirement, Criteria, or Limitation                   | Citation                                                        | Description                                                                                                                                                                                      | Comments                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safe Drinking Water Act                                          | 42 USC Sect. 300(f)                                             |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                        |
| Standards for Owners and Operators of Public Water Supply System | 40 CFR 141                                                      | Provides treatment (water quality) requirements for public water supply systems.                                                                                                                 | MCLs may be relevant and appropriate to the establishment of cleanup goals for groundwater contamination.                                                                                                                                                                              |
| Underground Injection Control (UIC) Regulations                  | 40 CFR Parts 144-147                                            | Provides for protection of underground sources of drinking water.                                                                                                                                | If an alternative involved onsite underground injection, this part would be applicable.                                                                                                                                                                                                |
| Clean Water Act                                                  | 33 USC Sect. 1251-1376                                          |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                        |
| National Pollutant Discharge Elimination System (NPDES)          | 40 CFR Parts 122 and 125                                        | Requires permits for the discharge of pollutants from any point source into waters of the United States.                                                                                         | A permit is not required for onsite CERCLA response actions, but the substantive requirements would apply if an alternative involved discharge into a creek or other surface water on site. A permit would be required if the discharge is to a creek or other surface water off site. |
| Ambient Water Quality Criteria                                   | 40 CFR Part 131<br>Quality Criteria for Water, 1976, 1980, 1986 | Requires the states to set ambient water quality criteria (AWQC) criteria for water quality based on use classifications and the criteria developed under Section 304(a) of the Clean Water Act. | AWQCs for some inorganic and organic constituents in the groundwater at the site have been developed and may be relevant and appropriate.                                                                                                                                              |
| National Pretreatment Standards                                  | 40 CFR Part 403                                                 | Sets standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate sewage sludge.                          | If an alternative involved discharge to a publicly owned treatment works, these standards would be applicable.                                                                                                                                                                         |
| Toxic Pollutant Effluent Standards                               | 40 CFR Part 129                                                 | Establishes effluent standards or prohibitions for certain toxic pollutants: aldrin/dieldrin, DDT, endrin, toxaphene, benzdine, PCBs.                                                            | These contaminants are not site attributable potential contaminants of concern at the site. However, if these contaminants are detected, these regulations would be applicable.                                                                                                        |

**Table 13-2**  
**Potential Action-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standard, Requirement, Criteria, or Limitation          | Citation                                                                                             | Description                                                                                                                                 | Comments                                                                                                                                           |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Clean Air Act                                           | 42 USC Sect. 7401-7642                                                                               |                                                                                                                                             |                                                                                                                                                    |
| National Ambient Air Quality Standards                  | 40 CFR 50.1-.17, .50-.54; .150-.154 .480-.489; 40 CFR 53.1-.33; 40 CFR 61.01-.18 .50-.112, .240-.247 | Treatment technology standard for emissions to air from incinerators, surface impoundments, waste piles, landfills, and fugitive emissions. | If an alternative involved emissions governed by these standards then the requirements would be applicable.                                        |
| Noise Control Act of 1972                               | 42 USC Sect. 4901 et seq.                                                                            | Federal activities must not result in noise that will jeopardize the health or welfare of public.                                           | If activities, such as drilling, etc., were to take place too close to a public access point, this may be applicable.                              |
| Hazardous Materials Transportation Act                  | 49 USC Sect. 1801-1813                                                                               |                                                                                                                                             |                                                                                                                                                    |
| Hazardous Materials Transportation Regulations          | 49 CFR Parts 107, 171-177                                                                            | Regulates transportation of hazardous materials.                                                                                            | If an alternative involved transportation of hazardous materials, these requirements would apply. Does not apply to remediation onsite.            |
| <b>STATE</b>                                            |                                                                                                      |                                                                                                                                             |                                                                                                                                                    |
| North Carolina Solid and Hazardous Waste Management Act | General Statutes, Chapter 130A, Article 9                                                            |                                                                                                                                             |                                                                                                                                                    |
| Solid Waste Management Rules                            | 15A NCAC 13B                                                                                         | Establishes state-level comprehensive residual waste management system.                                                                     | Potentially applicable to remedial actions involving removal of wastes that qualify as residual waste. Potentially applicable to drill cuttings.   |
| Hazardous Waste Management                              | 15A NCAV 13A                                                                                         | Establishes state-level version of comprehensive waste management system.                                                                   | Potentially applicable to remedial actions involving removal of wastes that qualify as hazardous wastes. Potentially applicable to drill cuttings. |
| Water Pollution Control Regulations                     | NCAC Title 15, Chapter 2, Subchapter 2H                                                              | Requires permit for discharge of effluent from point sources into surface waters. State-level version of federal NPDES program.             | Potentially applicable to remedial actions involving point source discharges to surface waters.                                                    |

**Table 13-2**  
**Potential Action-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| <b>Standard, Requirement, Criteria, or Limitation</b> | <b>Citation</b>                                                  | <b>Description</b>                                                                                                   | <b>Comments</b>                                                                                 |
|-------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Wastewater Treatment Requirements                     | NCAC Title 15, Chapter 2, Subchapter 2H.01                       | Establishes basic wastewater treatment requirements for effluent discharge.                                          | Potentially applicable to remedial actions involving point source discharges to surface waters. |
| Erosion Control                                       | 15A NCAC, Chapter 4, Subchapter 4B                               | Establishes erosion and sedimentation control measures for earth-moving activities                                   | No earth-moving activities are anticipated for the groundwater remedial action.                 |
| North Carolina Water and Air Resources Act            | General Statutes, Chapter 143, Article 21                        |                                                                                                                      |                                                                                                 |
| Standards for Contaminants                            | NCAC Title 15A, Chapter 2, Subchapter 2D                         | Establishes state source-specific emissions limitations for particulate matter, sulfur compounds, odor, and opacity. | Not applicable to the groundwater remediation at the site.                                      |
| Standards for Sources of VOCs                         | NCAC Title 15A, Chapter 2, Subchapter 2D                         | Establishes state standards for storage tanks containing VOCs.                                                       | Potentially applicable to remedial actions utilizing storage tanks for wastes containing VOCs.  |
| North Carolina Groundwater Quality Standards          | NCAC Title 15A, Chapter 2, Subchapters 2L.0100, 2L.0200, 2L.0300 | Establishes a series of classifications and water quality standards applicable to groundwater of the state.          | Potentially applicable to remedial actions involving remediation of groundwater.                |

**Table 13-3**  
**Potential Location-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standard, Requirement, Criteria, or Limitation | Citation                                                                                                    | Description                                                                                                                                                                                                                                                     | Comment                                                                                                                                 |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>FEDERAL</b>                                 |                                                                                                             |                                                                                                                                                                                                                                                                 |                                                                                                                                         |
| National Historic Preservation Act             | 16 United States Code (USC) § 470<br>40 Code of Federal Regulations (CFR) Part 6.301 (b)<br>36 CFR Part 800 | Requires federal agencies to take into account the effect of any federally-assisted undertaking or licensing on any district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. | No current district site, building, structure, or object listed on or eligible for the National Register is on or adjacent to the site. |
| Archaeological and Historic Preservation       | 16 USC Sect. 469<br>40 CFR Sect. 6.301(c)                                                                   | Establishes procedures to provide for preservation of historical and archaeological data which might be destroyed through alteration of terrain as a result of a Federal construction project or a Federally licensed activity or program.                      | No current historical or archeological data is on or adjacent to the site.                                                              |
| Historic Site, Buildings, and Antiquities Act  | 16 USC Sect. 461-467<br>40 CFR Sect. 6.301(a)                                                               | Requires Federal agencies to consider the existence and location of landmarks on the National Registry of Natural Landmarks to avoid undesirable impacts on such landmarks.                                                                                     | No current National Landmark is on or adjacent to the site.                                                                             |
| Fish and Wildlife Coordination Act             | 16 USC Sect. 661-666                                                                                        | Requires consultation when Federal department or agency proposes or authorizes any modification of any stream or other water body and adequate provision for protection of fish and wildlife resources.                                                         | Unlikely that an alternative would cause damage or loss of wildlife by modifying a stream or body of water.                             |
| Endangered Species Act                         | 16 USC 1531<br>50 CFR Parts 200 and 402                                                                     | Requires action to conserve endangered species within critical habits upon which endangered species depend, includes consultation with Department of Interior.                                                                                                  | No threatened or endangered species or critical habitats are identified at the site.                                                    |
| Migratory Bird Treaty Act                      | 16 USC 703 et seq.                                                                                          | No federal action may jeopardize the habitat of birds with migratory pathways through the area.                                                                                                                                                                 | Unlikely that an alternative would effect any migratory pathways.                                                                       |
| EPA Regulations on sole-source aquifers        | 40 CFR 149                                                                                                  | No activities, including drilling, in an area designated a sole-source aquifer may take place without special permission of the EPA.                                                                                                                            | The aquifer in the Potter's Pits site area is not identified as a sole-source aquifer, this regulation would not be applicable.         |
| Clean Water Act                                | 33 USC Sect. 1251 et. seq.                                                                                  |                                                                                                                                                                                                                                                                 |                                                                                                                                         |

**Table 13-3**  
**Potential Location-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| Standard, Requirement, Criteria, or Limitation          | Citation                                                  | Description                                                                                                                                                                                                                   | Comment                                                                                                |
|---------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Dredge or Fill Requirements (Section 404)               | 40 CFR Parts 230 and 231                                  | Requires permits for discharge of dredged or fill material into navigable waters.                                                                                                                                             | Unlikely that an alternative would require discharge of dredge or fill material into navigable waters. |
| Rivers and Harbors Act of 1899                          | 33 USC Sect. 403                                          |                                                                                                                                                                                                                               |                                                                                                        |
| Section 10 Permit                                       | 33 CFR Parts 320-330                                      | Requires permit for structures of work in or affecting navigable waters.                                                                                                                                                      | It is unlikely that an alternative would effect a navigable waterway.                                  |
| Executive Order on Flood Plain Management               | Executive Order No. 11,988                                | Requires Federal agencies to evaluate the potential effects of actions they may take in a flood plain to avoid, to the extent possible, the adverse impacts associated with direct and indirect development of a flood plain. | Site activities will be located outside the 500-year flood plain.                                      |
| Executive Order on Protection of Wetlands               | Executive Order No. 11,990.40 CFR 6.302(a) and Appendix A | Requires Federal agencies to avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists. | Unlikely an alternative would have a negative impact on area wetlands.                                 |
| Wilderness Act                                          | 16 USC 1311<br>50 CFR 35.1                                | Administer facility owned wilderness area to leave it unimpacted.                                                                                                                                                             | No wilderness areas exist on site or adjacent to the site.                                             |
| National Wildlife Refuge System                         | 16 USC 668<br>50 CFR 27                                   | Restricts activities within a National Wildlife Refuge.                                                                                                                                                                       | No wildlife refuge areas exist on site or adjacent to the site.                                        |
| Scenic River Act                                        | 16 USC 1271<br>40 CFR 6.302(e)                            | Prohibits adverse effects on scenic river.                                                                                                                                                                                    | No scenic river is in the area of the site.                                                            |
| Coastal Zone Management Act                             | 16 USC 1451                                               | Conduct activities in accordance with State approved management program.                                                                                                                                                      | The site is not located near the coastal zone.                                                         |
| <b>STATE</b>                                            |                                                           |                                                                                                                                                                                                                               |                                                                                                        |
| North Carolina Solid and Hazardous Waste Management Act | General Statutes, Chapter 130A, Article 9                 |                                                                                                                                                                                                                               |                                                                                                        |

**Table 13-3**  
**Potential Location-Specific ARARs**  
**Sigmon's Septic Tank Site**  
**Statesville, Iredell County, North Carolina**

| <b>Standard, Requirement, Criteria, or Limitation</b>                 | <b>Citation</b>   | <b>Description</b>                                                                                                                                              | <b>Comment</b>                                                                                   |
|-----------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Siting Criteria for Hazardous Waste Treatment and Disposal Facilities | 15A NCAC 13A.0009 | Establishes state siting criteria for new hazardous waste treatment and disposal facilities.                                                                    | Potentially applicable if a treatment or disposal facility is set up onsite for hazardous waste. |
| Dam Safety and Waterway Management Act                                | 15A NCAC          | Establishes state criteria for protection of wetlands.                                                                                                          | No wetlands have been identified on the Potter's Pits site.                                      |
| Watershed Management Act                                              | 15A NCAC          | Establishes state criteria for protection of floodplains.                                                                                                       | The site is not located in a floodplain as defined by FEMA.                                      |
| Game and Wildlife Code                                                | 15A NCAC          | Allows the State Game Commission to protect, propagate, manage, and preserve game fur-bearing animals and birds through management of lands for public hunting. | The site is private property and not designated for hunting activities.                          |

## **APPENDIX C**

### **Proposed Plan Fact Sheet**



# PROPOSED PLAN FACT SHEET SIGMON'S SEPTIC TANK SITE

Statesville, Iredell County, North Carolina

OPERABLE UNIT #1

June 2006

The purpose of the fact sheet is to announce the Proposed Plan for the clean-up of the soils at the Sigmon's Septic Tank Site. The U.S. Environmental Protection Agency (EPA) invites comments from June 19 through July 19, 2006.

## Dates to Remember

### Proposed Plan Meeting

Celeste Henkel School  
1503 Old Mountain Road  
Statesville, North Carolina  
Thursday - June 22, 2006  
6:30 - 7:30 p.m.

### Public Comment Period

June 19 through July 19, 2006

### This Fact Sheet:

- Includes a brief history of the Site and the principle findings of the Site investigations;
- Presents the Alternatives for the Site considered by EPA;
- Outlines the criteria used by EPA to recommend an alternative for use at the Site;
- Provides a summary of the analysis of alternatives;
- Informs the public that the EPA is proposing to issue a **Record of Decision (ROD)** for Operable Unit #1 (OU1) for the Site; and

- Explains the opportunities for the public to comment on the remedial alternatives.

### EPA Announces Proposed Plan

This Proposed Plan identifies the Preferred Alternative for cleaning up the contaminated soil at the Sigmon's Septic Tank Site and provides the rationale for this preference. In addition, this Plan includes summaries of other cleanup alternatives evaluated for use at this Site. This document is issued by the EPA, the lead agency for Site activities, and the North Carolina Department of Environment and Natural Resources (NC DENR), the support agency. EPA, in consultation with the NC DENR, will select a final remedy for the Site after reviewing and considering all information submitted during the 30-day public comment period.

EPA, in consultation with the NCDENR, may modify the Preferred Alternative or select another response action presented in this Plan based on new information and/or public comments. Therefore, the

public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the Remedial Investigation/Feasibility Study (RI/FS) Report and other documents contained in the Administrative Record file for this Site. EPA and the State encourage the public to review these documents to gain a more comprehensive understanding of the Site and Superfund activities that have been conducted at the Site.

## **Site History**

Sigmon Septic Tank Service, a wholly owned subsidiary of AAA Enterprises, was owned and operated by the Sigmon family since 1948. Henry Sigmon purchased the property at 1268 Eufola Road and moved operations to this location approximately 5 miles southwest of Statesville, Iredell County, North Carolina. The business pumped septic tank waste and heavy sludges from residential, commercial, and industrial customers; installed and repaired septic tanks; and provided a variety of industrial waste removal services. Private landowners own the properties located east and west of the Sigmon Septic Tank Services; the Pine Grove Cemetery is also located east of the Site (See Figure 1).

The Site is approximately 15.35 acres in size. According to Iredell County plat maps, the Site was divided into two properties at the time of its operation; the southern parcel is 8.9 acres in size and was listed in the name of the deceased Henry Sigmon, and the northern parcel is 6.45 acres in size and was owned by his daughter, Mary Sigmon. Mary Sigmon and her family lived in the onsite residence located on the northern property. Several years ago, the Sigmon property was sold; the current owner owns both parcels and resides in the onsite

house formerly occupied by Mary Sigmon.

A 1.25 acre pond (former borrow pit) is located south of the Sigmon house. An office trailer is located south-southeast of the pond and an open-walled, roofed storage shed is located southeast of the office. Access to the interior of the property (i.e., to the office and open-walled shed) is provided by a gravel driveway that runs north-south along the eastern Site boundary. At the time of the EPA Site visit (September 26, 2001) there were empty rusted drums, buckets, old tires, old car seats, and other debris within and near the storage shed; these have been removed since that time. The drums formerly contained car wash fluids and/or liquid waste from International Paper.

Approximately 100 feet south of the shed next to the gravel access road were six above-ground storage tanks containing liquid waste: two rectangular concrete basins (approximately 1,000 gallons each); two cylindrical rusted tanks (approximately 10,000 gallons each); and two cylindrical rusted tanks (approximately 12,000 gallons each). These tanks were also removed by the property owner.

A waste pile and former lagoons are located in the southern portion of the Site. Two lightly vegetated, open pits approximately 2 to 3 feet in depth are located near the southeastern corner of the Site. The two pits are approximately 30 feet by 10 feet and 15 feet by 8 feet in size. The Site is fenced with a 4-foot barbed wire fence and warning signs are posted on the fence and trees.

There are breaks in the fence on the eastern and southern sides of the Site.

## **Regulatory and Environmental Investigation Time-line**

- 1970 - Sigmon family relocates existing business to the Site.
- 1970 to 1978 - Wastewaters were

discharged to the City of Statesville sewer.

- 1978 - 1992 - Septic wastes were disposed in ten unlined lagoons onsite (Southern portion of the Site).
- April 1995 - the NCDENR required the lagoons to be closed.
- June 1998 - the NCDENR conducted an extensive combined Preliminary Assessment/Site Inspection (PA/SI).
- March 2000 - An expanded Site Inspection (ESI) was completed.
- October 2002 - An RI/FS was conducted.
- April 27, 2005 - The Agency for Toxic Substances and Disease Registry (ATSDR) assessed Public Health.
- March 24, 2006 - An Action Memorandum for a time critical removal action at the Site was signed.

### **Site Characteristics**

During 2002 through July 2005, EPA's contractor Black & Veatch Special Projects Corporation (Black & Veatch), conducted an RI, a Baseline Human Health Risk Assessment (BHHRA), a Screening Level Ecological Risk Assessment (SLERA), and an FS. These documents identified the types, quantities, and locations of contaminants and developed ways to address the contamination problems. They indicated that as a result of Site activities, contaminants were found in Site soil in concentrations exceeding human health levels. A brief description is outlined below:

### **Soils**

The results of the RI sampling event documented an estimated 7,600 cubic yards of contaminated soil containing inorganics

(primarily vanadium) located both onsite and offsite and an estimated 1,400 cubic yards of contaminated soil containing both inorganics and organics located in the onsite stockpile that will require remediation. Subsurface soil samples collected during the RI showed contaminated soil extending down to approximately 7 feet below land surface in the soil stockpile area. Some contaminants appear to be leaching from soils at the source to shallow groundwater under the site. EPA has determined that no response actions are needed for surface water and sediments. Contamination of these media does not present an unacceptable risks to human health or the environment. The results of the RI sampling event revealed that contamination appears to be limited to onsite and offsite surface soils sporadically throughout the Site as well as the soil stockpile area. Based on the information obtained from the RI, the Contaminant of Concern (COC) is listed below:

- Surface Soil (Onsite/Offsite): Vanadium

### **SCOPE AND ROLE OF THE ACTION**

This action, referred to as a Proposed Plan for OU-1, will be the first action for the Site. The Site was divided into two Operable Units:

- ▶ OU-1: Soils, surface water and sediment
- ▶ OU-2: Groundwater

Further groundwater investigation is needed to fully characterize the extent of groundwater contamination before a ROD for groundwater (OU-2) can be issued. However, there is sufficient information now on the soil contamination problem to allow issuance of a ROD for soil (OU-1). Postponing the soil ROD so that one ROD could be issued for all Site contamination problems would cause a delay in achieving a significant reduction in Site risk to human health. By dividing the Site contamination problems into two operable units, necessary response actions for soil and

groundwater can proceed independently as soon as they are ready.

## **SUMMARY OF SITE RISKS**

As part of the focused FS, a baseline human health risk assessment was conducted to evaluate human health risks associated with current and future Site conditions. Also, a screening level ecological risk assessment was completed to evaluate risk to the environment from Site contaminants. However, it was determined that there were no ecological risks associated with the Site.

### **Human Health Risks**

Health risks are evaluated to determine whether chemicals can cause cancer or non-cancer illness. The Sigmon's Septic Tank Site does not pose any unacceptable cancer risks to residents based on current and future populations and uses of the Site. However, non-cancer hazards are a concern in onsite and offsite soil for residents in multiple areas across the Site.

Ingestion of and dermal contact with surface soil in onsite and offsite areas poses an unacceptable non-cancer hazard for residents exposed to vanadium. Therefore, EPA plans to remove contaminated onsite surface soil in the south, southeast, north, and central portions of the Site. In addition, offsite surface soil will be removed from the northwest portion of the Site.

Some exposure scenarios were based on future construction workers who may encounter vanadium in deeper soils via ingestion and dermal contact. Construction workers exposed to vanadium in subsurface soil poses an unacceptable hazard. As a result, EPA plans to remove contaminated subsurface soils in onsite areas in the southeastern portion of the Site beneath the soil stockpile.

Additional contamination is present onsite where stockpiles are located and in areas with

sludge associated with debris piles. Therefore, EPA plans to remove contaminated onsite surface soil from stockpiles and debris piles in the southeastern portion of the Site.

## **REMEDIAL ACTION OBJECTIVES**

The Remedial Action Objectives (RAOs) for the Site are to:

- ▶ Eliminate future migration of COCs from soil to groundwater.
- ▶ Eliminate or reduce future migration of surface soil COCs to other surface media (surface water or sediment).
- ▶ Protect health of human receptors near the Site.
- ▶ Provide additional Site data to assess restoration potential.
- ▶ Any remedial action for groundwater will be addressed under the OU2 activities.

## **SOIL ALTERNATIVES**

### **Alternative S1: NO ACTION**

Regulations governing the Superfund program generally require that the "no action" alternative be evaluated generally to establish a baseline for comparison. Under this alternative, EPA would take no action at the Site to prevent exposure to the soil contamination. Since hazardous wastes would remain onsite, this alternative would require continued monitoring of the soil and 5-Year Reviews.

*Estimated Capital Cost: \$0*

*Estimated Annual O&M Cost: \$6,600*

*Estimated 5-Year Review Cost: \$26,400*

*Estimated Present Worth Cost: \$78,424*

*Estimated Construction Time Frame: None*

### **Alternative S2:**

## **REMOVAL/TREATMENT: EXCAVATE, CHEMICALLY STABILIZE HIGHLY CONTAMINATED SOIL, AND DISPOSE OF THE CONTAMINATED SOIL ONSITE**

This alternative consists of excavation, consolidation, solidification/stabilization to treat the highly contaminated soil, and onsite disposal. It is assumed that 25 percent of the total contaminated soil volume is highly contaminated and will require solidification/stabilization treatment prior to onsite land disposal. Solidification/stabilization treatment includes thoroughly mixing a chemical reagent or chemical mixture into the contaminated soil to initiate a chemical reaction that (a) chemically or physically alters the contaminant(s) into a less mobile form or (b) solidifies the soil-chemical mass into an inert matrix. The treated and untreated soil would be disposed into an appropriate onsite disposal area. The onsite disposal area will be capped with a 1 foot soil layer and grass cover.

Institutional controls such as fencing and deed restrictions may be implemented for the onsite disposal area. The soil and vegetative cap will be maintained throughout the life of the remedy.

*Estimated Capital Cost: \$1,076,650*  
*Estimated Annual O&M Cost: \$21,600*  
*Estimated 5-Year Review Cost: \$26,400*  
*Estimated Present Worth Cost: \$2,017,592*  
*Estimated Construction Time Frame: 1 year*

## **Alternative S3: EXCAVATION, CHEMICALLY STABILIZE HIGHLY CONTAMINATED SOIL, AND OFFSITE TRANSPORTATION AND DISPOSAL AT A SUBTITLE D LANDFILL**

This alternative is similar to Alternative S2 except that the treated and untreated soil will be

disposed at an offsite RCRA secured Subtitle D landfill. It is assumed that 25 percent of the soil is highly contaminated and require solidification/stabilization treatment prior to disposal. This alternative will remove all soil exceeding the Site cleanup goals from the Site and adjacent properties. The excavated areas will be backfilled with clean soil and re-vegetated.

Deed restrictions may be placed on the Site while the remedial action takes place. Water would be used to minimize fugitive dust emissions during soil excavation, transport and handling. The re-vegetated areas will be monitored and maintained on a quarterly basis for the first 3 years to ensure survival of the vegetation.

*Estimated Capital Cost: \$1,331,231*  
*Estimated Annual O & M Cost: \$10,000 for the first 3 years only*  
*Estimated 5-Year Review Cost: \$0*  
*Estimated Present Worth Cost: \$2,189,494*  
*Estimated Time Frame: 1 year*

## **EVALUATION OF ALTERNATIVES**

Nine criteria are used to evaluate the different remediation alternatives individually and against each other in order to select a remedy. This section profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The nine evaluation criteria are discussed below. The "Detailed Analysis of Alternatives" can be found in the FS.

| <b>EVALUATION CRITERIA FOR SUPERFUND REMEDIAL ALTERNATIVES</b>                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Overall Protectiveness of Human Health and the Environment</b> determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment. |

|                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Compliance with ARARs</b> evaluates whether the alternative meets Federal and State environmental statutes, regulations, and other requirements that pertain to the Site, or whether a waiver is justified.                                                                                         |
| <b>Long-term Effectiveness and Permanence</b> considers the ability of an alternative to maintain protection of human health and the environment over time.                                                                                                                                            |
| <b>Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment</b> evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.                            |
| <b>Short-term Effectiveness</b> considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.                                                                                                  |
| <b>Implementability</b> considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.                                                                                                             |
| <b>Cost</b> includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent. |
| <b>State/Support Agency Acceptance</b> considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.                                                                                                                                    |
| <b>Community Acceptance</b> considers whether the local community agrees with EPA's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.                                                                                     |

## EPA's Preferred Alternative

As discussed in the introduction, EPA is proposing to issue a ROD for the Site. After conducting a detailed analysis of all the feasible cleanup alternatives based on the criteria described in the previous sections, EPA is proposing the following cleanup plan to address contamination at the Sigmon's Septic Tank Site. The EPA preferred alternative is:

### **Alternative S3 - EXCAVATION, CHEMICALLY STABILIZE HIGHLY CONTAMINATED SOIL, AND OFFSITE TRANSPORTATION AND DISPOSAL AT A SUBTITLE D LANDFILL**

Contaminated soils would be excavated, transported to a central area onsite for consolidation, solidification/stabilization treatment (as necessary) and staging. The treated and untreated contaminated soil would then be transported and disposed at a Subtitle D landfill. The Site will be backfilled with clean borrow material from a local source, then the Site will be revegetated and restored to safe and usable conditions.

Based on the information available at this time, EPA and the NC DENR believe the Preferred Alternative would be protective of human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions. The Preferred Alternative can change in response to public comment or new information.

## Community Participation

EPA and NC DENR provide information regarding the cleanup of the Sigmon's Septic Tank Site to the public through Fact Sheets, public meetings, the Administrative Record file for the Site, and announcements published in the Statesville Newspaper. EPA and the State encourage the public to gain a more comprehensive understanding of the Site and the Superfund activities that have been conducted at the Site.

Information regarding the public comment period, public meeting, and the locations of the Administrative Record files, are provided on the front page of this Proposed Plan.

**For further information on the Sigmon Septic Tank Site, please contact:**

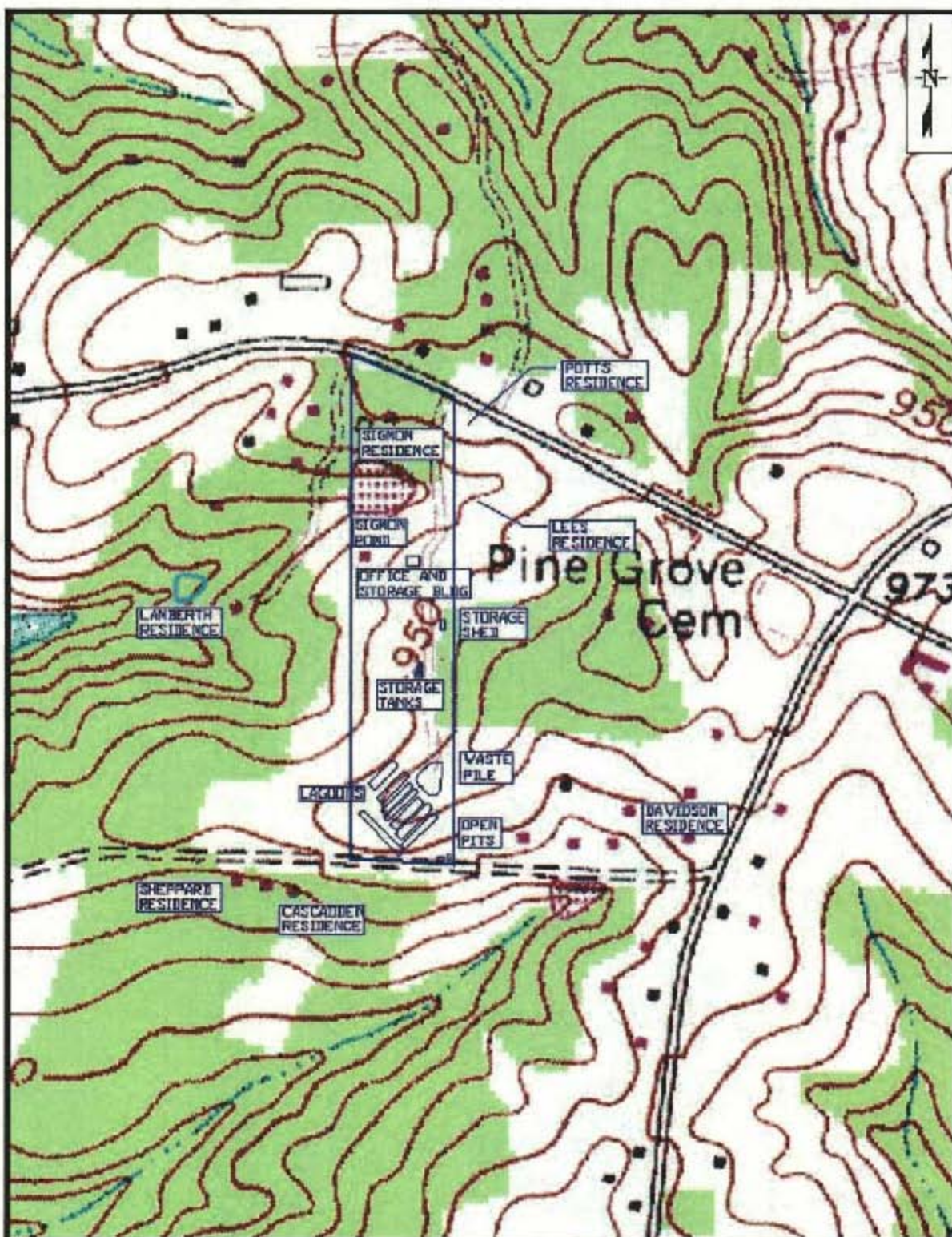
Beverly T. Stepter.  
Remedial Project Manager  
(404) 562-8816 or (800) 435-9233  
e-mail: STEPTER.BEVERLY@EPA.GOV

or

Linda Starks  
Public Affairs Specialist  
(404) 562-8487 or (800) 435-9233  
e-mail: STARKS.LINDA@EPA.GOV  
EPA  
61 Forsyth Street, SW  
Atlanta, GA 30303-8960

or

Nile Testerman  
Project Manager  
(919) 508-8400 x8482  
e-mail: Nile.Testerman@ncmail.net  
NCDENR  
401 Oberlin Road, Suite 150  
Raleigh, NC 27605



REF 8. - USGS 7.5 MINUTE SERIES TOPOGRAPHIC MAP; TROUTMAN, NC 1993.

1" = 3,000'



SITE LAYOUT MAP  
SIGMON'S SEPTIC TANK SITE  
STATESVILLE, IREDELL COUNTY, NORTH CAROLINA

FIGURE  
1

Your input on the Proposed Plan for the Sigmon's Septic Tank Site is important to EPA. Comments provided by the public are valuable in helping EPA select a final cleanup remedy for the Site. You may use the space below to write your comments. Comments must be postmarked by July 19, 2006. If you have any questions about the comment period, please contact Beverly T. Stepter at (404) 562-8816 or through EPA's toll-free number at 1-800-435-9233. Those with electronic communications capabilities may submit their comments to EPA via the Internet at the following e-mail address:

Comments may also be mailed to:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.



Region 4



61 Forsyth Street, SW  
Atlanta, GA 30303-8960

**Official Business**

**Penalty for Private Use \$300**

**Linda Starks, Waste Division 11<sup>th</sup> Floor**  
**Public Affairs Specialist**

**APPENDIX D**

**Responsiveness Summary**

**No Comments Were Received**

## **APPENDIX E**

### **State Concurrence Letter**



North Carolina Department of Environment and Natural Resources

Dexter R. Mathews, Director

Division of Waste Management

Michael F. Easley, Governor  
William G. Ross Jr., Secretary

10 August 2006

Ms. Beverly Stepter  
Superfund Branch, Waste Management Division  
US EPA Region IV  
61 Forsyth Street, SW  
Atlanta, Georgia 30303

SUBJECT: Concurrence with Record of Decision  
Sigmon's Septic Tank Site Operable Unit #1  
Statesville, Iredell County

Dear Ms. Stepter:

The State of North Carolina has reviewed the Record of Decision (ROD) received by the Division on 10 August 2006 for the Sigmon's Septic Tank Site Operable Unit #1 and concurs with the selected remedy, subject to the following conditions:

1. State concurrence on the ROD for this site is based solely on the information contained in the ROD received by the State on 10 August 2006. Should the State receive new or additional information which significantly affects the conclusions or amended remedy contained in the ROD, it may modify or withdraw this concurrence with written notice to EPA Region IV.
2. State concurrence on this ROD in no way binds the State to concur in future decisions or commits the State to participate, financially or otherwise, in the clean up of the site. The State reserves the right to review, overview comment, and make independent assessment of all future work relating to this site.
3. If, after remediation is complete, the total residual risk level exceeds  $10^{-6}$ , the State may require deed recordation/restriction to document the presence of residual contamination and possibly limit future use of the property as specified in NCGS 130A-310.8

The State of North Carolina appreciates the opportunity to comment on the ROD and looks forward to working with EPA on the remedy for the subject site. If you have any questions or comments, please call Nile Testerman at 919 508-8482.

Sincerely,

Dave Lowm, Head  
Remediation Branch  
Superfund Section

cc: Jack Butler, Chief NC Superfund Section  
Nile Testerman, NC Superfund