

14710

**DECLARATION FOR THE  
RECORD OF DECISION**

**SITE NAME AND LOCATION**

Bennington Landfill  
Bennington, Vermont  
CERCLIS ID No. VDT981064223

**STATEMENT OF PURPOSE**

This decision document presents the selected No Further Action decision for the Bennington Landfill Site (the "Site"), located in Bennington, Vermont. This document was developed 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); 40 CFR Part 300 et seq. (1990). The Director of the Office of Site Remediation and Restoration for Region I of the United States Environmental Protection Agency (EPA) has been delegated the authority to approve this Record of Decision (ROD).

The State of Vermont has concurred with the No Further Action decision.

**STATEMENT OF BASIS**

This decision is based on the administrative record compiled for the Site which was developed in accordance with Section 113(k) of CERCLA. The administrative record is available for public review at the Office of the Town Manager in Bennington, Vermont and at the EPA Region I Office of Site Remediation and Restoration Record Center in Boston, Massachusetts. The administrative record index (attached as Appendix G to the ROD) identifies each of the items which comprise the administrative record upon which the selection of the remedial action is based.

**DESCRIPTION OF THE SELECTED REMEDY**

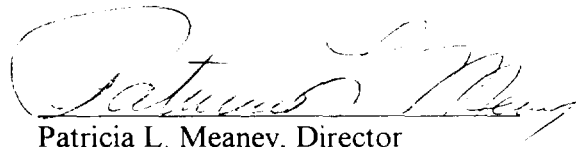
EPA has determined that No Further Action is necessary to address the contamination at the Site. EPA will perform 10 years of additional monitoring of the groundwater, surface water, and sediments starting with the completion of the NTCRA.

## DECLARATION

EPA has determined that no further remedial action is necessary at this Site. Previous response actions implemented as part of a non-time-critical (NTCRA) removal action have adequately controlled the principle and low-level threats at the Site. The NTCRA controls include: excavation and placement of PCB contaminated soils and sediments in the landfill; a multi-barrier landfill cap over the entire area of solid waste disposal; diversion of upgradient groundwater using an interceptor trench; collection and treatment of leachate; and institutional controls preventing future Site use. A consent decree has been entered into between EPA and the PRPs that will assure the long-term operation and maintenance of the NTCRA. In addition, the groundwater at the Site has been reclassified by the State of Vermont to further restrict future use.

As this is a decision for No Action, the statutory requirements of CERCLA Section 121 for remedial actions are not applicable. However, EPA does intend to perform 5-year reviews of the protectiveness of the cleanup actions taken at the Site as a policy five year review.

4/29/98  
Date

  
Patricia L. Meaney, Director  
Office of Site Remediation and Restoration

**NEW ENGLAND REGION**

**RECORD OF DECISION SUMMARY**

**FOR THE**

**BENNINGTON LANDFILL SUPERFUND SITE**

**September 1998**

**BENNINGTON LANDFILL SUPERFUND SITE**

**TABLE OF CONTENTS**

<b><u>Contents</u></b>	<b><u>Page Number</u></b>
<b>I. SITE NAME, LOCATION AND DESCRIPTION .....</b>	<b>1</b>
<b>II. SITE HISTORY &amp; ENFORCEMENT ACTIVITIES .....</b>	<b>1</b>
<b>A. Land Use &amp; Response History .....</b>	<b>1</b>
<b>B. Enforcement History .....</b>	<b>2</b>
<b>III. COMMUNITY PARTICIPATION .....</b>	<b>3</b>
<b>IV. SCOPE &amp; ROLE OF OPERABLE UNIT OR RESPONSE ACTION .....</b>	<b>4</b>
<b>V. SUMMARY OF SITE CHARACTERISTICS .....</b>	<b>4</b>
<b>VI. SUMMARY OF SITE RISKS .....</b>	<b>10</b>
<b>VII. DESCRIPTION OF NO FURTHER ACTION DECISION .....</b>	<b>19</b>
<b>VIII. DOCUMENTATION OF NO SIGNIFICANT CHANGES .....</b>	<b>19</b>
<b>VIII. STATE ROLE .....</b>	<b>20</b>
<b>APPENDIX A - Tables and Figures</b>	
<b>APPENDIX B - 1995 Risk Assessment Statistical Summary Tables and Risk Calculations</b>	
<b>APPENDIX C - 1997 Risk Assessment Statistical Summary Tables and Risk Calculations</b>	
<b>APPENDIX D - State Concurrence Letter</b>	
<b>APPENDIX E - Public Hearing Transcript</b>	
<b>APPENDIX F- Responsiveness Summary</b>	
<b>APPENDIX G- Administrative Record Index</b>	

**ROD DECISION SUMMARY**  
**September 1998**

**I. SITE NAME, LOCATION AND DESCRIPTION**

The Site is the Bennington Municipal Landfill Superfund Site and will hereafter be referred to as the "Site". The Site is located on the north side of Houghton Lane in the Town of Bennington, Vermont. The surrounding area is mixed rural undeveloped land and residential.

The Site consists of a 15 acre solid waste landfill and the surrounding areas impacted by the landfill. The impacted areas include the overburden ground water, surface water, and sediments. There is an active transfer station located on Town property in the southeastern portion of the Site. An active sand and gravel pit is located north of the Site, a wetlands serving as the headwaters for Hewitt Brook is located east of the Site, and residential areas are south, and U.S. Route 7 to the west. See Figures 1 and 2 of this ROD for the Site location and general Site features.

A more complete description of the Site can be found in the 1997 Remedial Investigation Report at pages 1-1 and 1-2 .

**II. SITE HISTORY AND ENFORCEMENT ACTIVITIES**

**A. Land Use and Response History**

The Site consists primarily of a 15 acre municipal solid waste landfill and associated drainage pond situated in an 85 acre parcel owned by the Town of Bennington, Vermont. Prior to the landfill, the location of the Site was a sand and gravel pit. The areas to the north and east of the Site are still actively mined for soil materials. The area directly east of the Site is wetland/woodland that is unlikely to be developed. The others areas surrounding the Site are residential.

The landfill began operation in 1969 and received commercial, residential, and industrial solid and liquid wastes. The Town of Bennington leased the property for use as a landfill until 1985, when it purchased the property. In April 1987, the landfill was closed and the Town established a transfer station adjacent to the location of the landfill.

Throughout the entire period of operation (1969-1987) residential, industrial, and commercial waste was disposed in the landfill. One portion of the landfill was used for the disposal of liquid wastes from 1969 - 1975. This area, know as the "lagoon", was covered with debris and is within the limits of the current solid waste mass. A drainage system was constructed within the landfill in 1976 to lower the groundwater level in the waste. The outlet for this drainage system was a pipe whose discharge was responsible for the creation of the drainage pond. The Town of Bennington performed a solid waste closure of the landfill in 1990 in accordance with the Vermont Solid Waste Program. Collection of the underdrain discharge was not included in the solid waste closure.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

There were no zoning or other land use restrictions in place at the start of the remedial investigation/feasibility study (RI/FS) that would preclude future residential use of the Site area. A solid waste transfer station and recycling facility are located adjacent to the landfill. The remaining area was used periodically by recreational off-road vehicles.

In December 1994, EPA signed an Action Memorandum to initiate a non-time-critical removal action (NTCRA) at the Site to address the source of contamination. The major components of the NTCRA are:

- construction of a multi-barrier landfill cap over the entire waste mass;
- construction of an upgradient interceptor trench to divert groundwater upgradient of the landfill around the waste;
- construction of a leachate collection and treatment system to collect the discharge from the underdrain discharge pipe and treat that water prior to discharge; and
- excavation and consolidation of sediments and soils with PCB concentrations above 1 mg/kg.

The NTCRA also included institutional controls to prevent future use of the Site. EPA entered into an Administrative Order with the potentially responsible parties (PRPs) for the design of the NTCRA in 1996. A Consent Decree was entered in August 1997 that covers the construction and long-term operation and maintenance of the NTCRA. The institutional controls required by the NTCRA were established and implemented in early 1998. To date, the interceptor trench, leachate collection and treatment system, institutional controls, and the PCB excavation have been completed. All construction activities for the NTCRA are expected to be completed by November 1998.

A more detailed description of the Site history can be found in the Remedial Investigation Report at pages 1-2 through 1-8. A more detailed description of the work performed under the NTCRA can be found in the Summary Assessment Report.

### **B. Enforcement History**

In March 1991 EPA notified approximately 25 parties of their potential liability with respect to the Site, such parties either owned or operated the Site, generated wastes that were shipped to the Site, arranged for the disposal of wastes at the Site, or transported wastes to the Site. Negotiations commenced with these PRPs in March 1991 regarding the settlement of the PRP's liability and responsibility for costs at the Site.

These PRPs formed a steering committee and substantive negotiations occurred with respect to the performance of the RI/FS. EPA entered into an Administrative Order by Consent with 12 PRPs in June

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

1991. An Administrative Agreement for Cost Recovery was also reached with the same 12 PRPs.

An additional 16 PRPs were issued a notice of potential liability in November 1994. Negotiations with respect to the PRP performance of the NTCRA began in July 1995. The PRPs formed a steering committee and additional substantive negotiations took place. In November 1996, EPA reached agreement with 5 PRPs regarding the performance of the NTCRA design. In August 1997, EPA finalized a Consent Decree with EPA, Vermont, and 19 PRPs regarding the construction activities, long-term operation and maintenance, and institutional controls required by the Action Memorandum for the NTCRA.

The PRPs have been active in the remedy selection process for this Site. The PRPs have prepared all of the major Site documents and substantive discussions have been held between EPA and the PRPs regarding numerous technical issues. EPA responded to all PRP comments submitted regarding the NTCRA. No PRP comments were received regarding the current action.

### **III. COMMUNITY PARTICIPATION**

Throughout the Site's history, community concern and involvement has been low. EPA has kept the community and other interested parties apprized of the Site activities through informational meetings, fact sheets, press releases and public meetings.

During April 1992, EPA released a community relations plan which outlined a program to address community concerns and keep citizens informed about and involved in activities during remedial activities.

On July 14, 1994, EPA released a fact sheet describing a proposed early cleanup action at the Site. On July 21, 1994 EPA held a public meeting to present a proposed early response action at the Site and to provide an update with respect to the results of the RI/FS. The early response action involved the use of EPA's NTCRA authority to control the source of the contamination at the Site. EPA held a 30-day public comment period regarding the proposed NTCRA from August 15, 1994 to September 15, 1994. EPA held a public hearing on September 13, 1994. An Action Memorandum documenting the selection of the NTCRA, including a Response to Comments, was signed December 19, 1994. A public information fact sheet was released in September 1997 to describe the NTCRA after completion of the design phase and in anticipation of the construction activities. The September 1997 fact sheet also provided an update of the RI/FS. A public meeting was held in September 1997 to answer any questions regarding Site activities. Another fact sheet was released in May 1998 to further update the NTCRA construction program and the RI/FS activities.

On July 20, 1998, EPA made the administrative record available for public review at EPA's offices in Boston and at the Bennington Town Manager's Office. EPA published a notice and brief analysis of the Proposed Plan in the Bennington Banner on July 8, 1998, and made the plan available to the public at the Bennington Town Manager's Office.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

On July 21, 1998, EPA held an informational meeting to discuss the results of the Remedial Investigation and to present the Agency's Proposed Plan. Also during this meeting, the Agency answered questions from the public. From July 22, 1998 to August 21, 1998, the Agency held a 30-day public comment period to accept public comment on the alternatives presented in the Proposed Plan and on any other documents previously released to the public. On August 11, 1998 the Agency held a public meeting to discuss the Proposed Plan and to accept any oral comments. A transcript of this meeting is included as Appendix E.

No public comments were received at the public hearing or during the comment period. The State of Vermont indicated an intent to concur with the proposed action during the August 11 public hearing.

### **IV. SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION**

The selected remedy is the second and final cleanup decision by EPA for the Site. The first cleanup decision was the Action Memorandum for the NTCRA. The NTCRA was designed to control the source of the groundwater, surface water, and sediment contamination. The Action Memorandum selecting the NTCRA was signed December 1994. A Consent Decree to implement the NTCRA was signed by EPA, VT DEC, and 19 PRPs in August 1997. The sediment excavation and consolidation, up-gradient interceptor trench, and leachate collection and treatment system components of the NTCRA were completed in 1997. Construction of the multi-barrier landfill cap was initiated in May 1998 and should be completed in November 1998. Institutional controls restricting future use of the Site are in place. These restrictions prohibit future use of the groundwater at the Site and restrict future development. The Consent Decree also requires the PRPs to maintain the landfill cap and leachate treatment system as well as the institutional controls.

The action (No Further Action) selected by this ROD represents the final Site action and assumes the successful implementation and maintenance of the NTCRA. Assuming the NTCRA is complete, an analysis of the risk for the pathways not addressed by the NTCRA indicates that no additional action was necessary at the Site. As a result, a Feasibility Study Report was not prepared. In place of the Feasibility Study Report, a Summary Assessment Report was prepared to provide supporting information for the selected action. The Summary Assessment Report is part of the Administrative Record and was made available for public review as part of the comment period. See Figure 3 of this ROD for a flow chart of the Site activities.

### **V. SUMMARY OF SITE CHARACTERISTICS**

A remedial investigation (RI) was performed at the Site from 1991 to 1997. The RI Report received final approval from EPA in December 1997. Most of the field work and data collection occurred from 1991 - 1994. A pre-RI field investigation program was performed in December 1991. This program included the use of geophysical techniques, field observations, and field screening using a mobile laboratory to better focus the RI Work Plan. From September 1992 to August 1993, the first major RI field program (Phase 1A of the RI) was performed to characterize the Site. Using the data collected from the Phase 1A investigations, a Phase 1B investigations was performed from April 1994 to June 1994. A total of 387 groundwater samples, 31 leachate

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

and associated soil samples, 69 sediment samples, 70 soil samples, 46 surface water samples, and 33 ambient air samples were obtained as part of the RI.

The first draft of the RI Report was prepared in 1994 based upon the data collected in these three field programs. Following the 1994 decision to initiate the NTCRA and based upon concerns regarding the groundwater data, low-flow sampling was performed at the Site from 1994-1997. The low-flow data collected from 1994-1997 was not included in the final RI Report released in December 1997. The low-flow groundwater data and additional surface water sampling data was documented in a series of monitoring reports. This data was summarized in the Summary Assessment Report and the June 1997 Risk Assessment. The significant findings of the Remedial Investigation are summarized below.

### **A. Soil**

The Presumptive Remedy for Municipal Landfill Sites was used at this Site. Therefore, EPA did not require sampling of the surface or subsurface soils within the landfill limits. Surface soil samples were obtained from areas surrounding the landfill and leachate outbreaks within the landfill limits. See Figure 4 of this ROD for the location of surface soil and sediment samples.

Low levels of volatile organic compounds (xylene and toluene), pesticides (gamma-chlordane, 4,4'-DDE, endosulfan II, and dieldrin), semi-volatile organic compounds (DEHP), PCBs (up to 11 mg/kg), and metals were detected in the soils surrounding the landfill. As described later in the risk section, PCBs were the only constituents of concern based upon the risk assessment. The highest levels of PCBs were detected in the soils at the edge of the drainage pond. As required by the Action Memorandum, all soils and sediments with PCB concentrations above 1 mg/kg were excavated as part of the NTCRA and have been placed under the cap. The 1 mg/kg cleanup level was based upon protection of human health and the environment. All non-PCB constituents were detected at very low concentrations. See section 2.2.7 of the RI for a detailed discussion of the soil sampling activities and section 4.2 for a discussion of the nature and extent of contamination.

## **B. Groundwater**

There are two groundwater systems at the Site. The shallow system is comprised of a surficial sand and gravel unit that ranges in thickness from 7 to 29 feet. The saturated thickness of the sand and gravel unit increases with the thickness of the unit. See Figure 5 of this ROD for a cross-section of the Site geology.

The surficial sand and gravel unit is underlain by a dense till. This unit was consistently dry during drilling and has been characterized as a confining layer. The till layer thickness ranges from 0 feet west of the landfill to 530 feet east of the landfill.

The bedrock and a deep sand and gravel unit represent the second water bearing formation at the Site. This unit is separated from the surficial sand and gravel unit by the till layer. Bedrock is exposed in several locations upgradient of the landfill limiting the horizontal extent of the surficial sand and gravel unit.

Groundwater flow in the surficial sand and gravel unit is predominantly west to east with the headwaters of Hewitt Brook serving as a discharge zone for the groundwater. This is confirmed by the pattern of groundwater contamination. See Figure 6 of this ROD for the area of groundwater contamination and Figure 7 for the location of monitoring wells.

The surficial sand and gravel unit has been impacted by the landfill. Volatile organic compounds, including vinyl chloride, chloroethane, 1,1 dichloroethene, 1,2 dichloroethene, 1,1,1 trichloroethane, trichloroethene, methylene chloride, and benzene, and several metals (barium and manganese) have been detected at elevated levels.

The surficial contamination extends from under the landfill to area east of the landfill where the groundwater recharges into a wetland that serves as the headwaters for Hewitt Brook. The concentrations of contaminants is very high in wells abutting the landfill and drop significantly within several hundred feet from the landfill. Table 1 lists the highest concentrations detected across all Site monitoring wells and with the wells that are within the NTCRA cap removed (B-6 and B-14). Table 1 demonstrates the significant decrease in concentrations within the plume with increasing distance from the landfill for all contaminants except arsenic, barium, and PCBs. The increase in arsenic with distance from the landfill is likely a result of the mobilization of arsenic from the natural soil materials due to the reducing environment created by the presence of landfill leachate. The detection of the higher PCB concentrations with distance is due to the underdrain discharge pipe that had previously discharged high concentrations of PCBs into the ground at the location of the drainage pond in close proximity to the wells where the PCBs were detected. The barium is only elevated at one location and the reason for the elevated levels is not clear.

RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

Table 1

Contaminant	Maximum Concentration including wells adjacent to landfill (B-6, B-14) (ug/l)	Maximum Concentration excluding B-6 and B-14 (ug/l)	MCL/VT Standard (ug/l)
1.1.1 - TCA	660	nd	200
1,1-DCE	30	nd	7
1.2 DCE	4,050	14	70
benzene	25	4	5
methylene chloride	180	2	5
PCE	70	nd	5
Toluene	1,650	0.8	1000
TCE	53	nd	5
Vinyl Chloride	95	11	2
PCBs	7	12	0.5
Arsenic	17	31	50
Barium	4,270	4,040	2,000
Beryllium	5.4	nd	4
Chromium	145	24	100
Cadmium	not detected	6	5
Lead	120	11	20
Manganese	2,300	1,480	no MCL or state standard 840 based upon hazard quotient of 1
Nickel	247	50	100

Low levels of volatile organic compounds have also been detected in the bedrock monitoring wells adjacent to the landfills. These levels have been consistently below drinking water standards. There is no good explanation for the presence of this contamination in the bedrock. It may be a result of the installation of the monitoring wells or a very small quantity of contamination may have migrated into the bedrock over time. The contaminated bedrock monitoring well location is within the limits of the landfill cap.

**C. Surface Water**

There are several surface water features at the Site. A drainage pond formed as a result of the underdrain discharge pipe. Three small unnamed ponds, known as Pond A, Pond B, and Pond C, are also located at the Site. In addition, a large wetland area that serves as the headwaters for Hewitt Brook is located east of the landfill.

The three Ponds are small surface water bodies that formed as a result of the sand and gravel excavation activities. The Ponds are essentially pits dug to the top of the water table. A drainage channel also exists just south of the transfer station to drain water from a small wetland into the larger wetland. The wetland that serves as the headwaters to Hewitt Brook and Hewitt Brook are natural features. Ponds A and B are within 500 feet of the landfill and 300 feet of the drainage pond. Ponds A and B are isolated from Pond C and the wetland during significant portions of the year. Only when the water table is high due to precipitation and snowmelt does water flow from Ponds A and B towards the wetland and Pond C. Ponds A and B are approximately 0.25 acres in size and have water depths ranging from a few inches to 2 feet. During dry periods these ponds are significantly reduced in size. Water does flow from Pond A to Pond B during periods of high water. Pond B contains areas of iron staining indicating the presence of landfill impacted water. Pond C is larger (0.5 acre) and further downgradient of the landfill.

Hewitt Brook, in the stretch from the wetland headwaters to Houghton Lane, is approximately three feet in width with water depths ranging from one to six inches. Hewitt Brook flows south and southwest and eventually discharges to the Walloomsac River 2.5 miles from the landfill. The headwaters of Hewitt Brook is a forested swamp. The headwaters of Hewitt Brook are classified as Class II (high quality wetland) by the State of Vermont.

Samples were obtained from all surface water bodies adjacent to the landfill including the drainage pond, unnamed ponds A, B, and C, and Hewitt Brook. See Figure 4 for the location of surface water samples. The drainage pond was the most significantly impacted water body at the Site. However, the drainage pond no longer exists as a result of the NTCRA excavation of the sediments of the pond and the collection and treatment of the underdrain discharge that was the source of water for the drainage pond.

Several pesticides and elements were detected in most of the surface water samples as well as the background samples. The surface water samples obtained from Hewitt Brook from 1994-1996 do not indicate a significant impact to the surface water. All of the elements were below ambient water quality criteria. Earlier samples from the headwaters indicated significant concentrations of several metals, especially iron. These samples contained very high levels of aluminum suggesting a possible turbidity related influence. Mono-, di-, and tri-chlorinated biphenyls (PCBs) were also detected in one surface water sample in Hewitt Brook at part per trillion concentrations. See Figure 8 for the locations of elevated levels of constituents during the 1991-1994 sampling program.

The leachate collection system and landfill cap are expected to prevent any further degradation of the surface water and sediment quality.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

### **D. Air**

Ambient air sampling was performed as part of the RI/FS. Ambient air was sampled at four locations including upwind. Trichloroethene, benzene, xylene, chlorobenzene, ethyl benzene, and PCBs were detected in the ambient air samples at all four locations. The concentrations detected were within the range of concentrations detected in an ambient air quality study for Burlington, VT. See Figure 9 for the location of the air samples.

### **E. Sediments**

Sediment samples were obtained from the drainage pond, Ponds A, B, and C, and Hewitt Brook. Significant PCB contamination was detected in the samples obtained from the drainage pond. Low levels of PCBs (below 1 mg/kg) were detected in Ponds B and C and no PCBs were detected in the sediments of Hewitt Brook. The area of the drainage pond adjacent to the underdrain discharge pipe contained PCBs up to 14,000,000 ug/kg. Concentrations decreased rapidly with distance from the underdrain discharge pipe. Elevated concentrations of some metals (iron and manganese) were detected in the headwaters of Hewitt Brook. Manganese was the only element detected above reference criteria in Hewitt Brook. See Figure 4 for the location of the sediment samples and Figure 10 for the location of elevated constituents in the sediments.

### **F. Landfill**

The 15 acre solid waste landfill is considered the source of the contamination at the Site. The landfill received both municipal and industrial waste from 1969 - 1987. In particular, a portion of the landfill was used for open dumping of liquid industrial wastes from 1969-1975. Significant quantities of industrial chemicals including PCBs, 1,1,1-TCA, TCE, and PCE were disposed into the lagoon. The exact location of the lagoon is not known as it was filled with waste and covered. Aerial photos and groundwater concentrations support that the lagoon was located in the southwestern portion of the landfill near the location of monitoring well MW-6. In addition to the lagoon, an underdrain system was also installed at the landfill to dewater certain portions of the waste that were in contact with the water table. The underdrain discharged to a depression on the east side of the landfill. This depression is referred to as the drainage pond. The underdrain served as a conduit for contaminated leachate to flow out of the landfill.

It is possible that some non-aqueous phase liquid (NAPL) contamination is located within the debris mass or under the landfill. Monitoring wells at the landfill perimeter do not suggest the presence of NAPL, however, the nature of the disposal strongly suggests the potential for NAPL to be present.

Based upon the drilling work performed during the RI, it is believed that the majority of the landfill waste is above the water table. After completion of the NTCRA, all of the landfill waste will be above the

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

water table. Therefore, significant reduction in the generation of leachate will occur as a result of the NTCRA. This reduction is already evident in the flow into the leachate collection and treatment system. Historical data for the underdrain discharge recorded a flow ranging from less than 1 gallon per minute (gpm) to 6 gpm. The flow of water from the underdrain system into the leachate collection and treatment system has been below 1 gpm with no significant fluctuations since the installation of the interceptor trench and leachate collection system in December 1997. Once the NTCRA is complete, contaminant levels in groundwater should steadily decline and will likely approach drinking water standards within 5-10 years of the completion of the NTCRA.

A complete discussion of site characteristics can be found in the Remedial Investigation Report in Sections 4.0 and 5.0.

### **VI. SUMMARY OF SITE RISKS**

A Risk Assessment (RA) was performed to estimate the probability and magnitude of potential adverse human health and environmental effects from exposure to contaminants associated with the Site. The public health risk assessment followed a four step process: 1) contaminant identification, which identified those hazardous substances which, given the specifics of the site were of significant concern; 2) exposure assessment, which identified actual or potential exposure pathways, characterized the potentially exposed populations, and determined the extent of possible exposure; 3) toxicity assessment, which considered the types and magnitude of adverse health effects associated with exposure to hazardous substances, and 4) risk characterization, which integrated the three earlier steps to summarize the potential and actual risks posed by hazardous substances at the site, including carcinogenic and non-carcinogenic risks. The results of the public health risk assessment for the Bennington Landfill Site are discussed below followed by the conclusions of the environmental risk assessment.

An initial baseline Human Health and Ecological Risk Assessment was prepared in 1995. Two additional risk assessments were performed for the groundwater in June 1997 and February 1998. The initial Risk Assessment was prepared concurrently with the development of the NTCRA using the RI data collected from 1991-1994.

To document the risk assessment activities performed by EPA at the Site, the Human Health Risk Assessment discussion will be presented in two parts. First, this ROD will address the exposure pathways, contaminants of concerns, and risk estimates contained in the original baseline risk assessment prepared in 1995. Following this discussion, the ROD will focus on those pathways that were not resolved by the NTCRA and that were evaluated to determine the need for any additional action beyond the NTCRA.

#### **1995 Risk Assessment**

Appendix B contains the summary tables of the data and risk calculations performed on all pathways as part of the original 1995 Risk Assessment. All of the compounds and elements detected during the sampling activities were evaluated in the risk assessment, therefore, there is no subset of contaminants in the 1995 Risk Assessment that are considered the contaminants of concern.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

Potential human health effects associated with exposure to the contaminants of concern were estimated quantitatively or qualitatively through the development of several hypothetical exposure pathways. These pathways were developed to reflect the potential for exposure to hazardous substances based on the present uses, potential future uses, and location of the Site. A current drinking water use scenario was not included as a water line provides water to residents down gradient of the landfill and no contamination was detected in any of the residential wells near the landfill. The area surrounding the landfill is mixed woodland and residential. While future residential use of the land adjacent to the landfill is possible, several factors make the potential for future residential use of the land above the groundwater contamination very unlikely. The areas where contamination is located are adjacent to the landfill and within the parcel of land (including the landfill) owned by the Town of Bennington. Most of the area of groundwater contamination outside the edge of the landfill is in a wetland. There are, however, several residences in very close proximity to the landfill and the Site area is often used by dirt bikes.

The original 1995 Risk Assessment also evaluated the risk from present and future exposure to surface water, sediments, soils, and ambient air. The following is a brief summary of the exposure pathways evaluated. A more thorough description can be found Chapter 3 of the 1995 Human Health Risk Assessment. A brief summary of the 8 exposure pathways quantitatively evaluated in the Human Health Risk Assessment is presented below.

### 1995 Human Health Risk Assessment Exposure Pathways

1. Future ingestion of overburden groundwater. This pathway assumes that a future water supply well could be installed up to the edge of the pre-NTCRA landfill boundary. It was also assumed that a user of that water supply would consume 2 liters of water per day, 350 days per year, for 30 years. All contaminants detected at the Site were assumed to be located at the Site of the water supply well and the arithmetic average was used to determine the average risk estimate. The maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.
2. Future ingestion of bedrock groundwater. Same exposure assumptions as for pathway 1 above.
3. Ingestion of, and dermal contact with, surface soils and dry, exposed sediments. The present scenario pathway assumes a trespasser or recreational user of the Site. Under the present scenario it was assumed that this individual would visit the Site 39 days per year for a period of 10 years. The 9-18 age group was targeted as the most likely category of Site visitors. It was also assumed that these individuals would ingest 100 mg of soil per visit. For the future scenario, residential development up to the edge of the landfill was assumed. Under the future scenario, 150 days per year of exposure for 30 years was assumed. An ingestion rate of 200 mg per visit was assumed for the first 6 years and 100 mg per visit for the remaining 24 years. All contaminants detected at the Site were assumed to be located at the Site of contact with the soil or sediments. The arithmetic average was used to determine the average risk estimate. The maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

4. Ingestion of, and dermal contact with, Brook and Pond submerged sediments. The present scenario pathway assumes a trespasser or recreational user of the Site. Under the present scenario it was assumed that this individual would visit the Site 13 days per year for a period of 10 years. The 9-18 age group was targeted as the most likely category of Site visitors. It was also assumed that they would ingest 100 mg of soil per visit. For the future scenario, residential development up to the edge of the landfill was assumed. Under the future scenario, 26 days per year of exposure for the first 6 years and 13 days per year of exposure for the remaining 24 years old was assumed. An ingestion rate of 200 mg of soil per visit was assumed for the first 6 years and ingestion of 100 mg of soil per visit was assumed for the remaining 24 years. All contaminants detected at the Site were assumed to be located at the Site of contact with the sediments. The arithmetic average was used to determine the average risk estimate. The maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.

5. Ingestion of, and dermal contact with, Underdrain submerged sediments. The present scenario pathway assumes a trespasser or recreational user of the Site. Under the present scenario it was assumed that this individual would visit the Site 13 days per year for a period of 10 years. The 9-18 age group was targeted as the most likely category of Site visitors. It was also assumed that they would ingest 100 mg of soil per visit. For the future scenario, residential development up to the edge of the landfill was assumed. Under the future scenario, 26 days per year of exposure for the first 6 years and 13 days per year of exposure for the remaining 24 years was assumed. An ingestion rate of 200 mg of soil per visit was assumed for the first 6 years and 100 mg per visit for the remaining 24 years. All contaminants detected at the Site were assumed to be located at the Site of contact with the sediments. The arithmetic average was used to determine the average risk estimate. The maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.

6. Ingestion of, and dermal contact with, Underdrain submerged sediments. The present scenario pathway assumes a trespasser or recreational user of the Site. Under the present scenario it was assumed that this individual would visit the Site 13 days per year for a period of 10 years. The 9-18 age group was targeted as the most likely category of Site visitors. It was also assumed that they would ingest 100 mg of soil per visit. For the future scenario, residential development up to the edge of the landfill was assumed. Under the future scenario, 26 days per year of exposure for the first 6 years and 13 days per year of exposure for the remaining 24 years was assumed. An ingestion rate of 200 mg of soil per visit was assumed for the first 6 years and 100 mg per visit for the remaining 24 years. All contaminants detected at the Site were assumed to be located at the Site of contact with the sediments. The arithmetic average was used to determine the average risk estimate. The maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.

7. Dermal contact with Pond and Brook Surface Water. The present scenario pathway assumes a trespasser or recreational user of the Site. Under the present scenario it was assumed that this individual would visit the Site 13 days per year for a period of 10 years. The 9-18 age group was targeted as the most likely category of Site visitors. It was also assumed that they would come into contact with Site contaminants on the hands, arms, legs, and feet during a 1 hour wading event in the surface water bodies.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

The surface water bodies were too shallow for swimming, therefore ingestion or inhalation of contaminants was not evaluated. For the future scenario, residential development up to the edge of the landfill was assumed. Under the future scenario, 26 days per year of exposure the first 6 years and 13 days per year of exposure for the remaining 24 years was assumed. The same 1 hour duration event was assumed. Hands, arms, legs, and feet were the exposed areas. Ingestion and inhalation were not evaluated for the future pathway. All contaminants detected at the Site were assumed to be located at the Site of contact with the sediments. The arithmetic average was used to determine the average risk estimate. The maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.

8. Inhalation of ambient air by a transfer station employee. For this pathway it was assumed that an individual working at the transfer station located at the edge of the landfill would ingest 20 cubic meters of air per day for 60 days per year over a 25 year period. All contaminants detected at the Site were assumed to be located at the Site of inhalation and the arithmetic average was used to determine the average risk estimate and the maximum concentration of a compound or element detected was used to estimate the reasonable maximum exposure scenario.

For each pathway evaluated, an average and a reasonable maximum exposure estimate was generated corresponding to exposure to the average and the maximum concentration detected in that particular medium.

Excess lifetime cancer risks were determined for each exposure pathway by multiplying the exposure level with the chemical specific cancer factor. Cancer potency factors have been developed by EPA from epidemiological or animal studies to reflect a conservative "upper bound" of the risk posed by potentially carcinogenic compounds. That is, the true risk is unlikely to be greater than the risk predicted. The resulting risk estimates are expressed in scientific notation as a probability (e.g.  $1 \times 10^{-6}$  for 1/1,000,000) and indicate (using this example), that an average individual is not likely to have greater than a one in a million chance of developing cancer over 70 years as a result of site-related exposure at the defined exposure assumptions. Current EPA practice considers carcinogenic risks to be additive when assessing exposure to a mixture of hazardous substances.

The hazard index was also calculated for each pathway as EPA's measure of the potential for non-carcinogenic health effects. A hazard quotient is calculated by dividing the exposure level by the reference dose (RfD) or other suitable benchmark for non-carcinogenic health effects for an individual compound. Reference doses have been developed by EPA to protect sensitive individuals over the course of a lifetime and they reflect a daily exposure level that is likely to be without an appreciable risk of an adverse health effect. RfDs are derived from epidemiological or animal studies and incorporate uncertainty factors to help ensure that adverse health effects will not occur. The hazard quotient is often expressed as a single value (e.g., 0.3) indicating the ratio of the stated exposure as defined to the reference dose value (in this example, the exposure as characterized is approximately one third of an acceptable exposure level for the given compound). The hazard quotient is only considered additive for compounds that have the same or similar toxic endpoint and the sum is referred to as the hazard index (HI). (For example: the hazard quotient for a compound known to produce liver damage should not be added to a second whose toxic endpoint is kidney damage).

RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

Table 2 depicts the carcinogenic and noncarcinogenic risk summary for the pathways evaluated in the 1995 Human Health Risk Assessment. Appendix B of this ROD contains the compound-specific risk estimates and exposure factors used to calculate the risks summarized below.

Table 2

Exposure Pathway	Present or Future	Hazard Index average scenario	Hazard Index reasonable maximum scenario	Cancer Risk average scenario	Cancer Risk reasonable maximum scenario
Overburden Groundwater	F	20	200	4 x 10 <sup>-4</sup>	4 x 10 <sup>-3</sup>
Bedrock Groundwater	F		10		1 x 10 <sup>-4</sup>
Surface soils and exposed sediments (Ingestion and dermal)	P	0.2	0.1	1x10 <sup>-6</sup>	1x10 <sup>-5</sup>
Surface soils and exposed sediments (Ingestion and dermal)	F	0.3	3.0	2x10 <sup>-5</sup>	2x10 <sup>-4</sup>
Brook and Pond submerged sediments	P	0.008	0.03	4x10 <sup>-7</sup>	1x10 <sup>-6</sup>
Brook and Pond submerged sediments	F	0.1	0.4	4x10 <sup>-6</sup>	1x10 <sup>-5</sup>
Underdrain Exposed Sediments	P	30	30	2x10 <sup>-3</sup>	2x10 <sup>-3</sup>
Underdrain Exposed Sediments	F	300	300	2x10 <sup>-2</sup>	2x10 <sup>-2</sup>
Drainage Pond submerged sediments	P	0.2	0.2	1 x 10 <sup>-5</sup>	2x10 <sup>-5</sup>
Drainage Pond submerged sediments	F	1	1	1x10 <sup>-4</sup>	1x10 <sup>-4</sup>
Pond and Brook Surface Water	P	0.02	0.08	1x10 <sup>-7</sup>	4x10 <sup>-7</sup>
Pond and Brook Surface Water	F	0.06	0.3	5x10 <sup>-7</sup>	2x10 <sup>-6</sup>
Ambient Air at Transfer Station	P	0.0001	0.0001	3x10 <sup>-7</sup>	3x10 <sup>-7</sup>

Based upon the results of the 1995 Human Health Risk Assessment summarized above, EPA implemented a non-time-critical removal action (NTCRA). The primary threats upon which the NTCRA was based were the exposure to contaminated underdrain sediments and future ingestion of overburden groundwater.

PCBs were the only constituent contributing to the risk levels in any of the soils and sediments scenarios. The NTCRA required all PCBs above 1 mg/kg to be excavated and placed under the cap. In groundwater, Vinyl chloride was the major contributor to the cancer risk with significant contributions from 1,1-dichloroethene, PCBs, arsenic, and beryllium. Manganese represented the majority (50%) of the non-cancer groundwater risk

RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

with arsenic, barium, 1,2-dichloroethene, and PCBs all with hazard quotients above 1.

**Revised Human Health Risk Assessments (June 1997 and February 1998)**

The NTCRA completely addressed the unacceptable risks represented by present and future potential exposure to contaminated soils and sediments. The 1995 Human Health Risk Assessment documented that the surface water and sediments of the Ponds and the soils in areas outside of the PCB contamination were not considered an unacceptable threat. Therefore, the only pathway not completely addressed by the NTCRA was exposure to contaminated overburden groundwater.

In addition, upon review of the 1995 Human Health Risk Assessment, EPA had concerns regarding the possible effect of turbidity on the presence and concentration of several elements that were evaluated in the 1995 Risk Assessment. EPA required the collection of additional data using the low-flow (or low-stress) sampling protocol to better assess groundwater quality. During the same time period two other factors changed: EPA completed a re-evaluation of the toxicity information relating to PCBs; and the final design of the NTCRA revealed that several wells used in the 1995 Risk Assessment would be within the limits of the landfill cap and should not be included in the risk estimates.

EPA completed an initial revised risk assessment for groundwater in June 1997. The same exposure assumptions of 350 days per year for 30 years at 2 liters of water per day were used. A revised toxicity value was used for PCBs and the data from wells 6 and 14, which are within the limits of the NTCRA cap, were excluded. Also, by the data collected from 1994-1997 using the low-flow sampling technique was used to estimate the risk. As shown in Tables 3 and 4 below, the 1997 revised Risk Assessment documents a significantly lower risk.

Table 3  
June 1997 Revised Cancer Risks  
Groundwater Ingestion

Contaminant	MCL (mg/l)	Average Conc. (mg/l)	Maximum Conc. (mg/l)	Slope factor	Average Cancer Risk	Maximum Cancer Risk
Benzene	0.005	0.002	0.004	0.029	1x10 <sup>-7</sup>	2x10 <sup>-6</sup>
chloroethane		0.008	0.05	0.0029	1x10 <sup>-8</sup>	2x10 <sup>-6</sup>
1,4-Dichlorobenzene	0.075	0.002	0.003	0.024	7x10 <sup>-8</sup>	8x10 <sup>-7</sup>
Methylene Chloride	0.005	0.0009	0.002	0.0075	2x10 <sup>-8</sup>	2x10 <sup>-7</sup>
Vinyl Chloride	0.002	0.002	0.011	1.9	1x10 <sup>-5</sup>	2x10 <sup>-4</sup>
PCBs	0.0005	0.004	0.012	0.07	6x10 <sup>-7</sup>	1x10 <sup>-5</sup>
Arsenic	0.05	0.15	0.31	1.75	7x10 <sup>-5</sup>	6x10 <sup>-4</sup>
Total Risk					8x10 <sup>-5</sup>	9x10 <sup>-4</sup>

Exposure factor for cancer risks = 0.0117

RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

Table 4  
June 1997 Revised Non-Cancer Risks  
Groundwater Ingestion

Contaminant	MCL (mg/l)	Average Conc. (mg/l)	Maximum Conc. (mg/l)	Reference Dose	Average Hazard Quotient	Maximum Hazard Quotient
Benzene	0.005	0.002	0.004	0.0017	0.02	0.07
Chlorobenzene	0.1	0.002	0.005	0.02	0.02	0.006
chloroethane		0.008	0.05	0.4	0.0004	0.003
1,2-Dichlorobenzene	0.6	0.0007	0.0007	0.09	0.0001	0.0002
1,4 Dichlorobenzene	0.075	0.002	0.003	0.23	0.0001	0.0003
1,1Dichloroethane		0.005	0.017	0.1	0.001	0.005
1,2Dichloroethene	0.07	0.003	0.014	0.01	0.006	0.04
Ethylbenzene	0.7	0.0005	0.0005	0.1	0.0001	0.0001
Methylene Chloride	0.005	0.001	0.002	0.06	0.0003	0.001
Napthalene		0.001	0.006	0.04	0.0005	0.004
Toluene	1	0.0001	0.006	0.2	0.00007	0.0001
1,2,4 Trimethylbenzene		0.0008	0.002	0.05	0.0003	0.001
PCBs	0.0005	0.004	0.012	2	0.0000007	0.00002
Arsenic	0.05	0.015	0.031	0.0003	1	3
Barium	2	1.68	4.04	0.07	0.5	2
Cadmium	0.005	0.003	0.007	0.0005	0.1	0.4
Chromium	0.05	0.003	0.06	0.005	0.03	0.3
Manganesc		0.783	1.48	0.024	0.6	2
Nickel	100	0.024	0.05	0.02	0.02	0.07
Vanadium		0.006	0.006	0.007	0.02	0.02
Zinc		0.72	0.323	0.3	0.005	0.03

exposure factor for non-cancer risks = 0.0274

RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

Of the 29 contaminants of concern, only 5 of the 29 (vinyl chloride, PCBs, arsenic, barium, and manganese) had a cancer risk above  $10^{-6}$  or a non-cancer hazard quotient above 1. The elimination of wells B-6 and B-14 greatly reduced the contaminant concentrations used to estimate the risks. In addition, the low-flow sampling eliminated several elements and provided a more realistic estimate of the other elements. The result of these changes was a significant decrease in the estimated risk from future ingestion of the overburden groundwater. The cancer risk was at the upper end of the acceptable risk range and the maximum hazard index was 3.

A further evaluation of the risk from groundwater ingestion was warranted given that the sole risk drivers at the Site were arsenic at a concentration well below the MCL and vinyl chloride just above the MCL. During the most recent sampling event (Spring 1997) vinyl chloride was only detected in one well outside the perimeter of the NTCRA cap at a concentration of 2.8 ug/l as compared to the MCL of 2 ug/l. A recent revision to the method for estimating the concentration term for the reasonable maximum exposure was used to develop a final and more realistic estimate of future risk from ingestion of groundwater. The average concentration per monitoring well location is calculated and the maximum of the average concentrations per location is used as the concentration term in the reasonable maximum exposure. This method is only appropriate when there is a significant data base of groundwater data. The risk estimates using the revised method is presented in Table 5.

Table 5  
February 1998 Revised Cancer Risks  
Groundwater Ingestion

Contaminant	MCL (mg/l)	Average Concentration (mg/l)	Maximum Average Concentration (mg/l)	Slope factor/ RFD	Maximum Hazard Quotient	Maximum Cancer Risk
Vinyl Chloride	0.002	0.002	0.06	1.9		$1.2 \times 10^{-4}$
PCBs	0.0005	0.004	0.08	0.07/ 2		$7 \times 10^{-6}$
Arsenic	0.05	0.15	0.21	1.5/ 0.0003	2	$3.7 \times 10^{-4}$
Barium	2	1.68	3.462	0.07	1.4	
Manganese		0.78	1.114	0.024	2	
Total Risk						$4.9 \times 10^{-4}$

Exposure factor for cancer risks = 0.0117

Exposure factor of non-cancer = 0.0274

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

- As shown in Table 5, the maximum potential carcinogenic risk is  $4.9 \times 10^{-4}$  and the maximum hazard index is 2. The non-cancer risk is within the range of risk considered acceptable by EPA Region I. The carcinogenic risk is at the upper end of the range of cancer risk considered acceptable by EPA Region I. Other factors regarding the nature of the threat and the potential for exposure are considered when the risk is at the upper end of the cancer risk range. The Institutional Controls preventing future use of the groundwater, the low probability of any future development of the area above the groundwater contamination, the fact that the most significant contaminant (responsible for 80% of the cancer risk) is at a concentration well below the MCL, and the availability of a water line all support the conclusion that no additional risk reduction is required at the Site.

Therefore, EPA has determined that no unacceptable human health risk was remaining after the NTCRA. As such, a Feasibility Study Report was not prepared and a Summary Assessment Report was developed to synthesis all of the supporting documentation for the Record of Decision.

### Ecological Risk Assessment

The June 1995 Risk Assessment also included an Ecological Risk Assessment. The Site includes several wetlands and the headwaters for Hewitt Brook which were evaluated as part of the Ecological Risk Assessment. Samples obtained during the RI were compared with applicable ecological toxicity benchmark values to develop an estimate of potential ecological impact from the Site. Visual observations and surveys of the area show that most of the areas away from the landfill have not been significantly impacted.

The soils at the end of the underdrain and the adjacent drainage pond contain PCBs levels that would not be acceptable from an ecological perspective. The PCBs at these locations were removed as part of the NTCRA and placed under the cap. The surface water of Hewitt Brook has not been significantly impacted by the Site. Some samples from Hewitt Brook and the Ponds have contained metals above ambient water quality criteria. However, data collected from 1994-1997 did not show an exceedance of water quality criteria in Hewitt Brook.

Sediment concentrations of iron and barium were significantly above background at several locations. The Ponds closest to the landfill do shown signs of iron precipitation and may experience a diminishment of function and value as a result of the iron floc. The landfill cap will gradually reduce the iron loading into Pond B.

The actions implemented as part of the NTCRA were considered to have resolved the ecological concerns at the Site by removing PCB contaminated soils and sediments and collecting and treating the leachate discharge from the landfill underdrain pipe. Therefore, no additional remedial objectives were established with respect to ecological risks following the NTCRA. In addition, recent sampling (1994-1996) of Hewitt Brook confirmed that the surface water currently meets ambient water quality criteria.

## RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

### **VIII. Description of No Further Action Alternative**

As detailed in the discussion and tables presented in this ROD, the NTCRA completely resolved all of the exposure pathways with the exception of groundwater. The NTCRA will significantly contribute to the restoration of groundwater and the prevention of groundwater use. The NTCRA institutional controls, including, among other measures, a Deed Restriction preventing future groundwater use over the entire area of contamination and the re-classification of the groundwater by the State of Vermont to class IV, non-potable, will effectively prevent any use of the contaminated groundwater at the Site. On this basis alone, EPA could support that the groundwater pathway has been completely addressed. In addition, EPA evaluated the remote risk that would result from future use of the groundwater between the edge of the NTCRA components and the wetlands. The risk estimates in Table 5 of this ROD are at the upper end of the EPA acceptable risk range. Given the low probability of future use, the actions completed and to be performed as part of the NTCRA, and the lack of a compelling significant risk, EPA has determined that there is no risk basis for any further action at the Site.

The No Further Action alternative includes 30 years of monitoring of the groundwater, surface water, and sediments to document that conditions do not change. EPA will perform years 1-10 of the monitoring and the State of Vermont will perform years 11 - 30. The estimated cost for 30 years of long-term monitoring is \$1,489,000 assuming a 7% discount factor.

All other long-term activities at the Site are covered by the NTCRA. Under the consent decree for the NTCRA, the PRPs are obligated to perform all long term operation, inspection, and maintenance activities for the NTCRA components (landfill cap, interceptor trench, and leachate collection and treatment system). In addition, the consent decree obligates the PRPs to maintain institutional controls over the area of groundwater contamination.

### **IX. DOCUMENTATION OF NO SIGNIFICANT CHANGES**

EPA presented a proposed plan (preferred alternative) for No Further Action to the public on 21, 1998. A public comment period was held from July 22, 1998 to August 21, 1998 during which EPA held a public hearing in August 11, 1998. No public comment was received during the public comment period or at the public hearing. The only comment received by EPA was a statement by the VT DEC at the public hearing expressing support for the proposed No Further Action decision. As such, no changes were made to the action included in the Proposed Plan. The transcript for the August 11, 1998 public hearing is included as Appendix E.

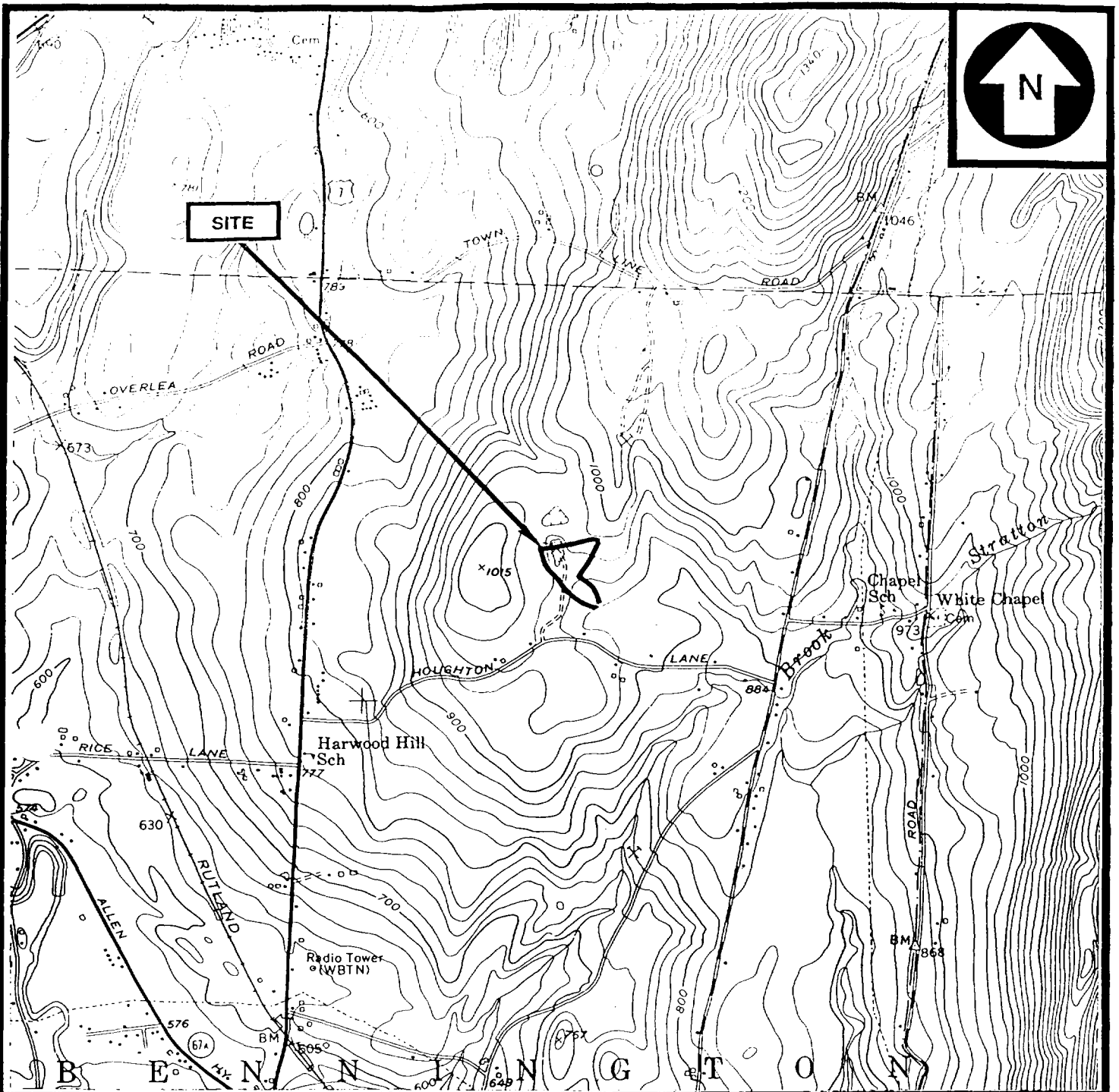
RECORD OF DECISION FOR THE BENNINGTON LANDFILL SUPERFUND SITE

**X. STATE ROLE**

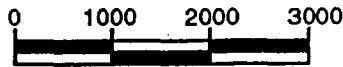
The Vermont Department of Environmental Conservation has been significantly involved in the Site and has indicated its support for the selected remedy. The State has also reviewed the Remedial Investigation, Risk Assessment and Summary Assessment Report to determine if the selected remedy is in compliance with applicable or relevant and appropriate State Environmental laws and regulations. The State of Vermont concurs with the selected remedy for the Bennington Landfill Superfund Site. A copy of the declaration of concurrence is attached as Appendix **D**.

## APPENDIX A

Figures



BASE MAP IS A PORTION OF THE FOLLOWING USGS 7.5' SERIES QUADRANGLE:  
 BENNINGTON, VT, 1954



SCALE = feet



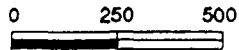
QUADRANGLE LOCATION

**LOCATION MAP**













**BENNINGTON LANDFILL SITE  
 BENNINGTON, VERMONT**

**TRC**

Figure 1-1.



Scale in feet

-  Wetland
-  Building
-  Residence
-  Paved Road
-  Drainage Culvert
-  Direction of Flow
-  Access/Dirt Road
-  Landfill Boundary
-  Edge of Vegetation
-  Ponded Surface Water
-  Surface Water Pathway
-  Topographic Depression

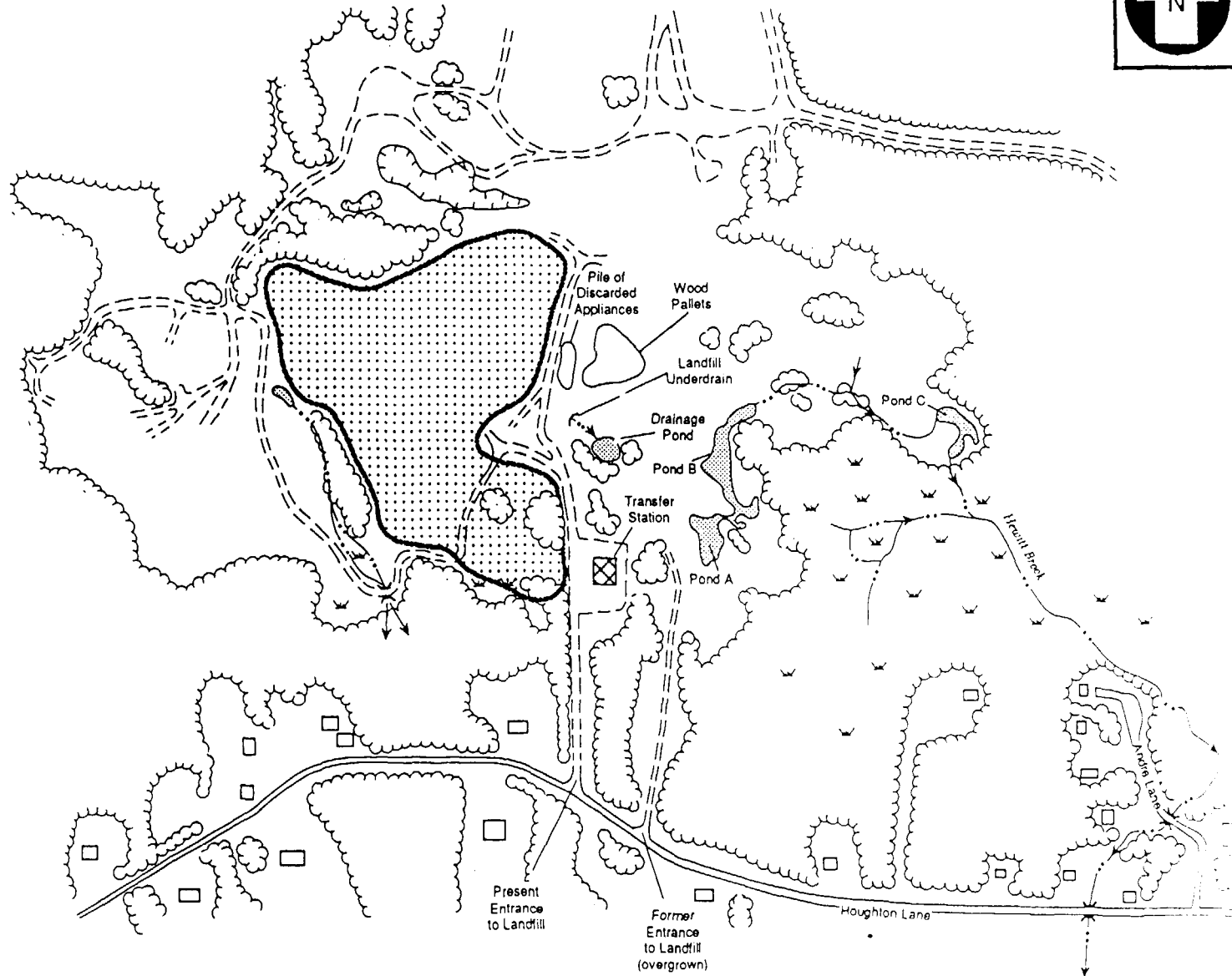


Figure 1-2. Site Features

BENNINGTON LANDFILL SITE  
BENNINGTON, VERMONT



Source: McLaren/Hart Environmental Engineering Corp., Bennington Landfill, 1993.

14  
2

# Bennington Landfill Site History

1969 - 1987  
Landfill Operational

1989  
• Landfill Closed  
• Site Listed on NPL

1991  
EPA and PRPs Agree to Conduct RI/FS

1994  
• Initial Site Characterization Completed  
• Project Subdivided to Expedite Remediation

Groundwater Component

Draft RI Report Submitted to EPA

Initial Human Health and Ecological Risk Assessment 1995

Low Stress Groundwater Sampling 1994 - 1997

Revised Groundwater Risk Assessment and Addendum 1997/1998

Final RI Approved by EPA - 1997

Summary Assessment Report 1998

Proposed Plan/Public Comment Summer 1998

Source Control Component

Approval Memorandum to Perform EE/CA Signed January 1994

Engineering Evaluation/Cost Analysis (EE/CA) July 1994

Fact Sheet/Public Comment July - August 1994

Action Memorandum Selecting Non-Time Critical Removal Action (NTCRA) 1994

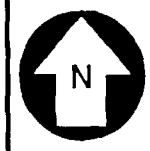
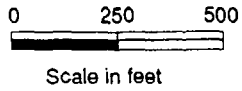
NTCRA Negotiations July 1995 - August 1997

NTCRA Design 1996 - 1997

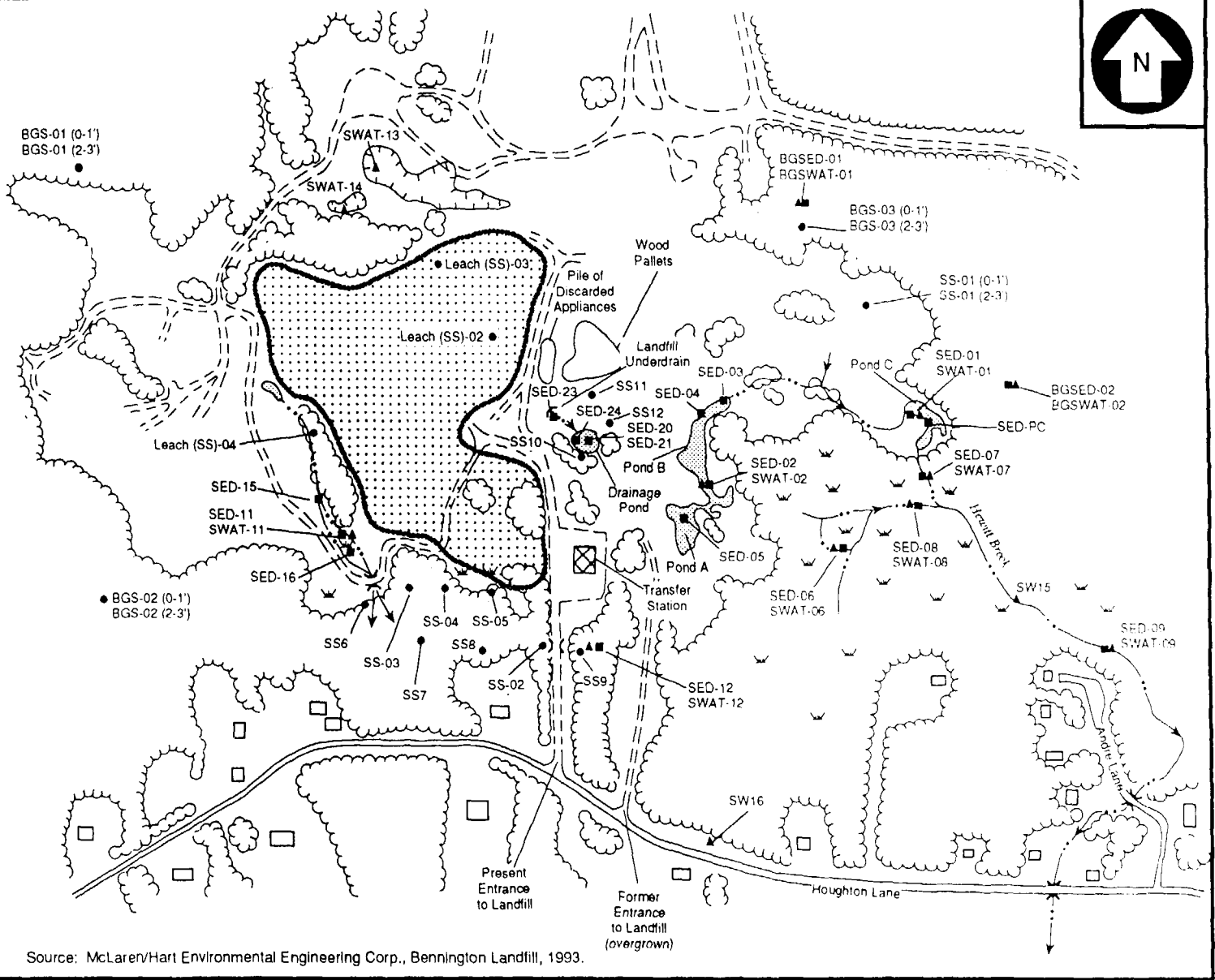
NTCRA Implementation September 1997 - 1998

FIGURE 2

2-194



- Wetland
- Building
- Residence
- Paved Road
- Drainage Culvert
- Direction of Flow
- Access/Dirt Road
- Landfill Boundary
- Edge of Vegetation
- Ponded Surface Water
- Surface Water Pathway
- Topographic Depression
- Surface Water Sample
- Sediment Sample
- Soil Sample

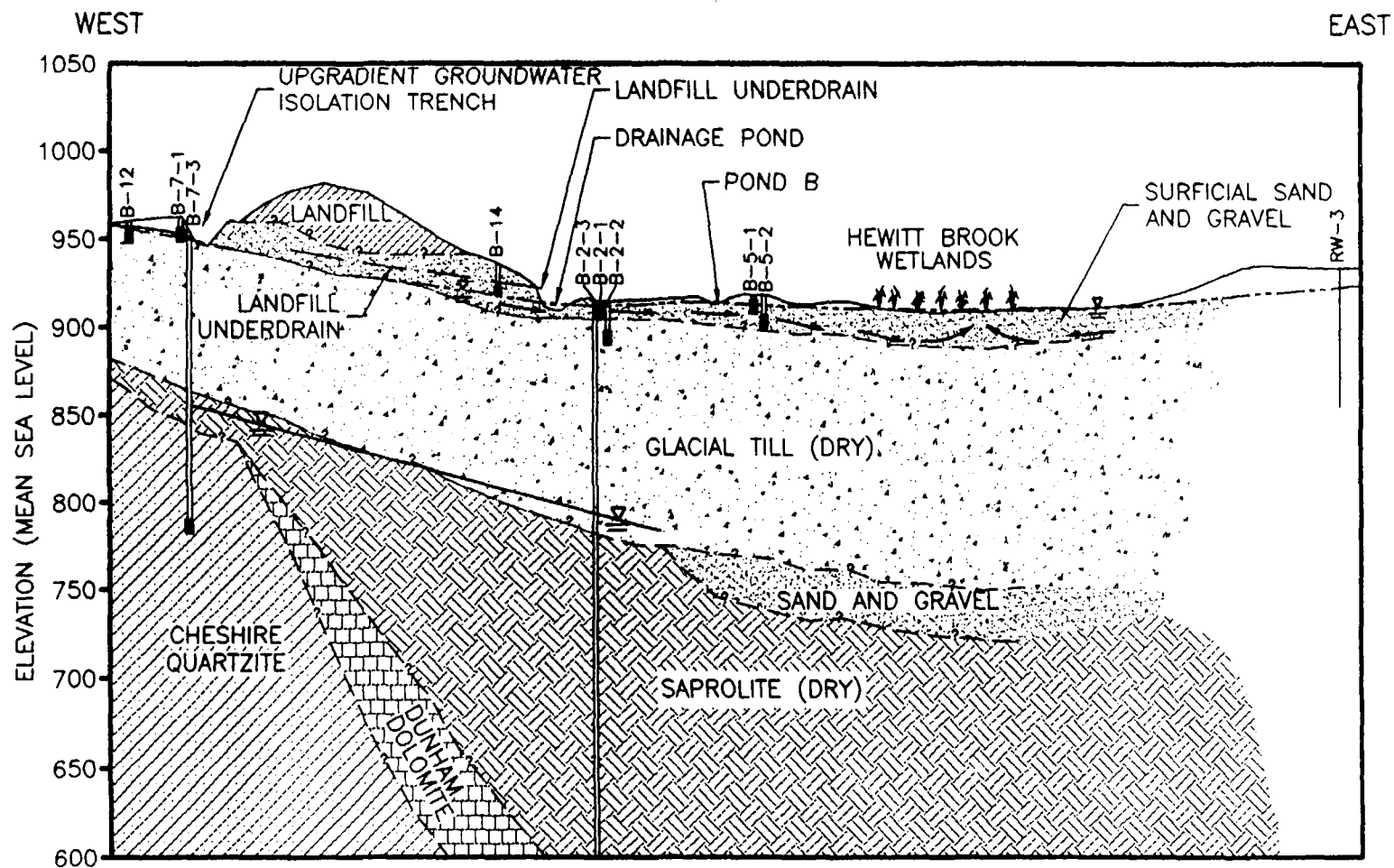


**Figure 2-2. Onsite Soil, Sediment, and Surface Water Sampling Locations**

BENNINGTON LANDFILL SITE  
BENNINGTON, VERMONT



Source: McLaren/Hart Environmental Engineering Corp., Bennington Landfill, 1993.



**LEGEND**

- - ? - - LOCATION OF INFERRED GEOLOGICAL CONTACT
- - - - PREDICTED STEADY-STATE PHREATIC SURFACE  
POST-CAP/TRENCH CONDITION - DAMES & MOORE,  
1997, GROUNDWATER FLOW MODEL, BENNINGTON  
LANDFILL, BENNINGTON, VERMONT, FIGURE 12
- - - - SURFACE, APRIL 1994  
ESTIMATED BEDROCK AQUIFER POTENTIOMETRIC
- - - - INFERRED GROUNDWATER FLOW DIRECTION
- BR-12, MONITORING WELL SCREENED INTERVAL

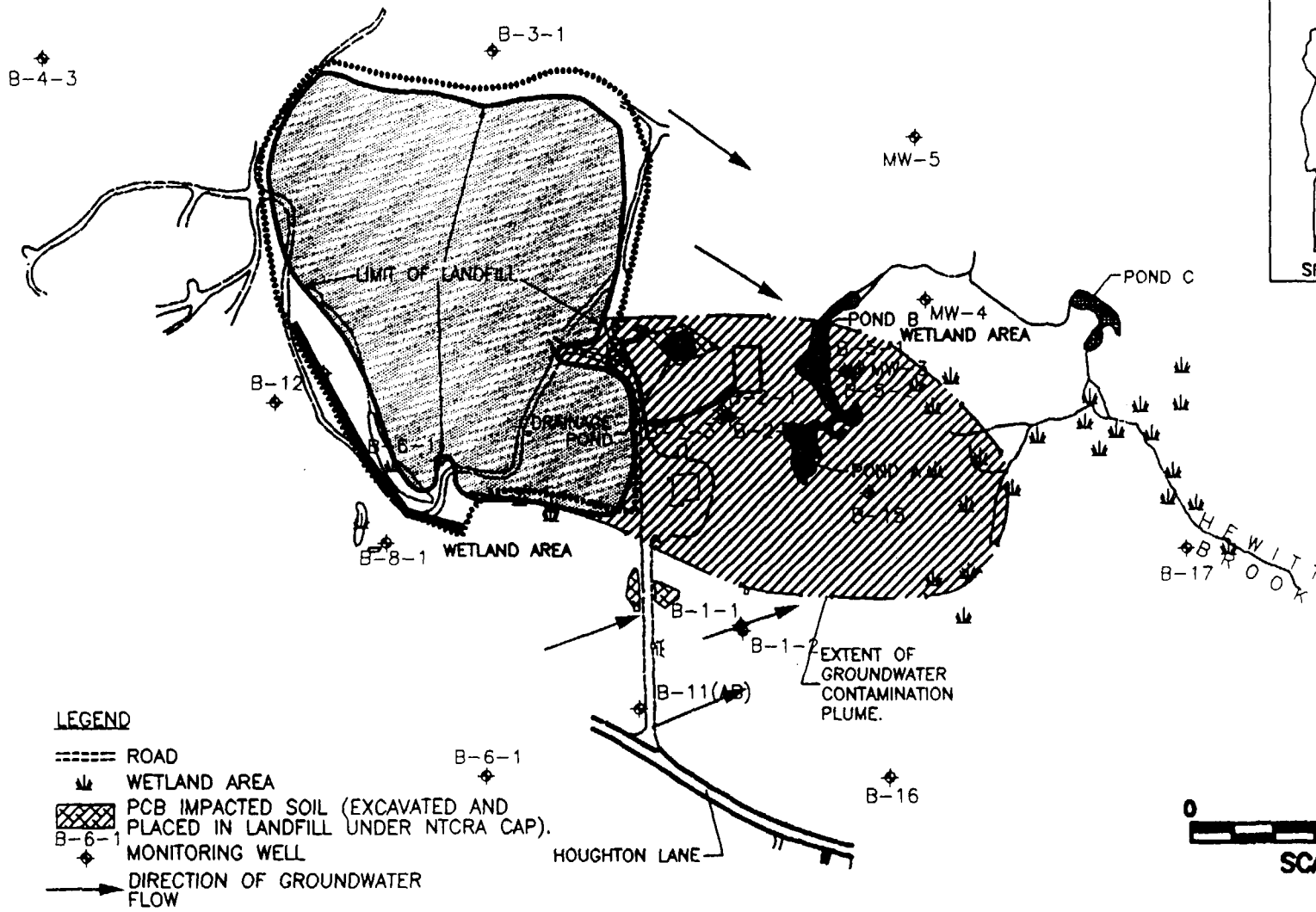


**NOTE:**  
ADAPTED FROM PLATE XI, REVISED DRAFT  
REMEDIAL INVESTIGATION REPORT,  
BENNINGTON LANDFILL SITE, BENNINGTON,  
VERMONT. McLAREN/HART ENVIRONMENTAL  
ENGINEERING CORPORATION, WARREN, NEW  
JERSEY, 1995.

**FIGURE 4**

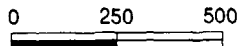
**GEOLOGIC CROSS-SECTION AND  
CONCEPTUAL HYDROGEOLOGIC MODEL**

9



NOTE:  
 EXTENT OF GROUNDWATER CONTAMINATION PLUME BASED UPON  
 REMEDIAL INVESTIGATION.

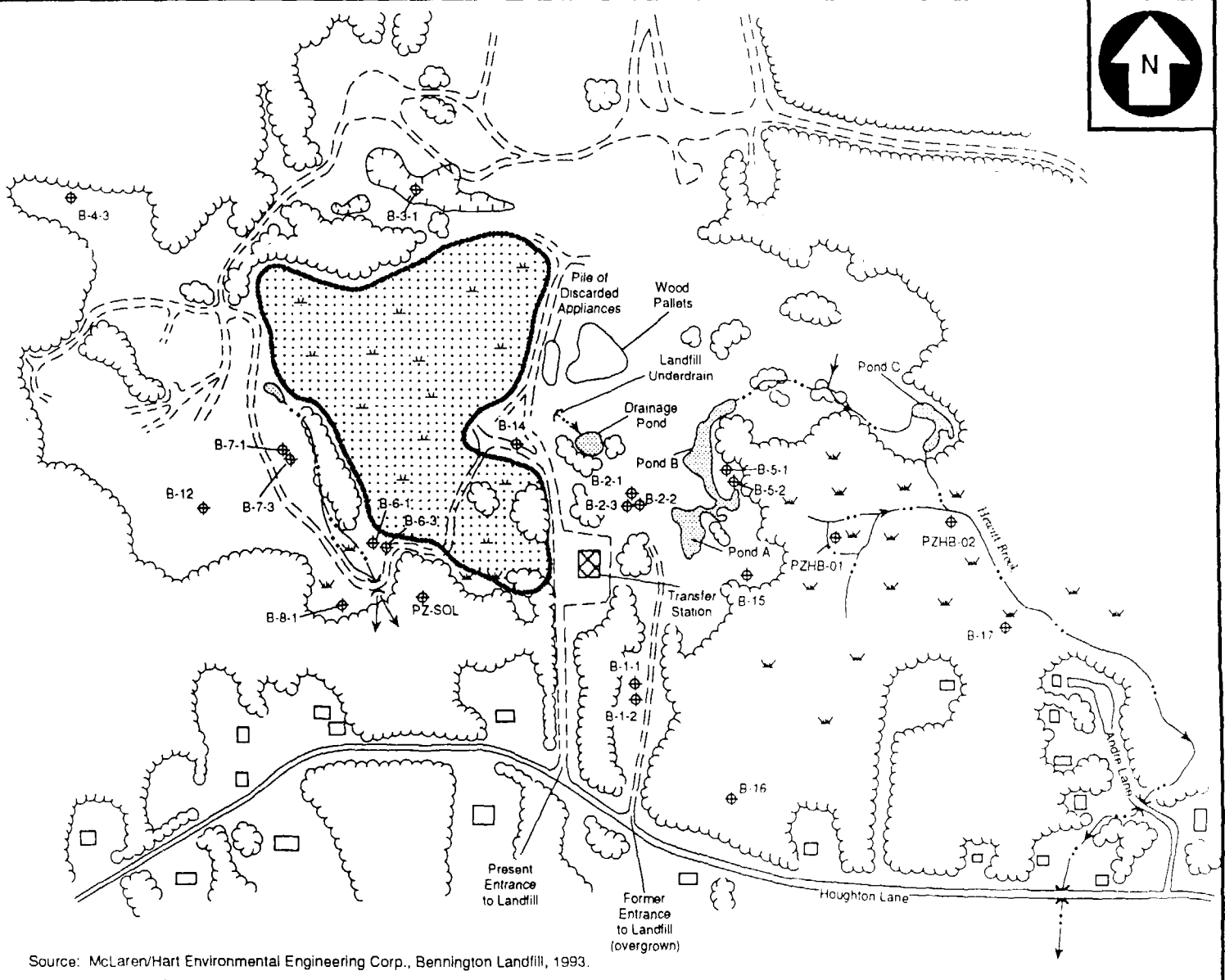
FIGURE 3  
 LOCATION OF GROUNDWATER  
 CONTAMINATION PLUME



Scale in feet



- Grass
- Wetland
- Building
- Residence
- Paved Road
- Drainage Culvert
- Direction of Flow
- Access/Dirt Road
- Landfill Boundary
- Edge of Vegetation
- Pondered Surface Water
- Surface Water Pathway
- Topographic Depression
- Existing Monitoring Well



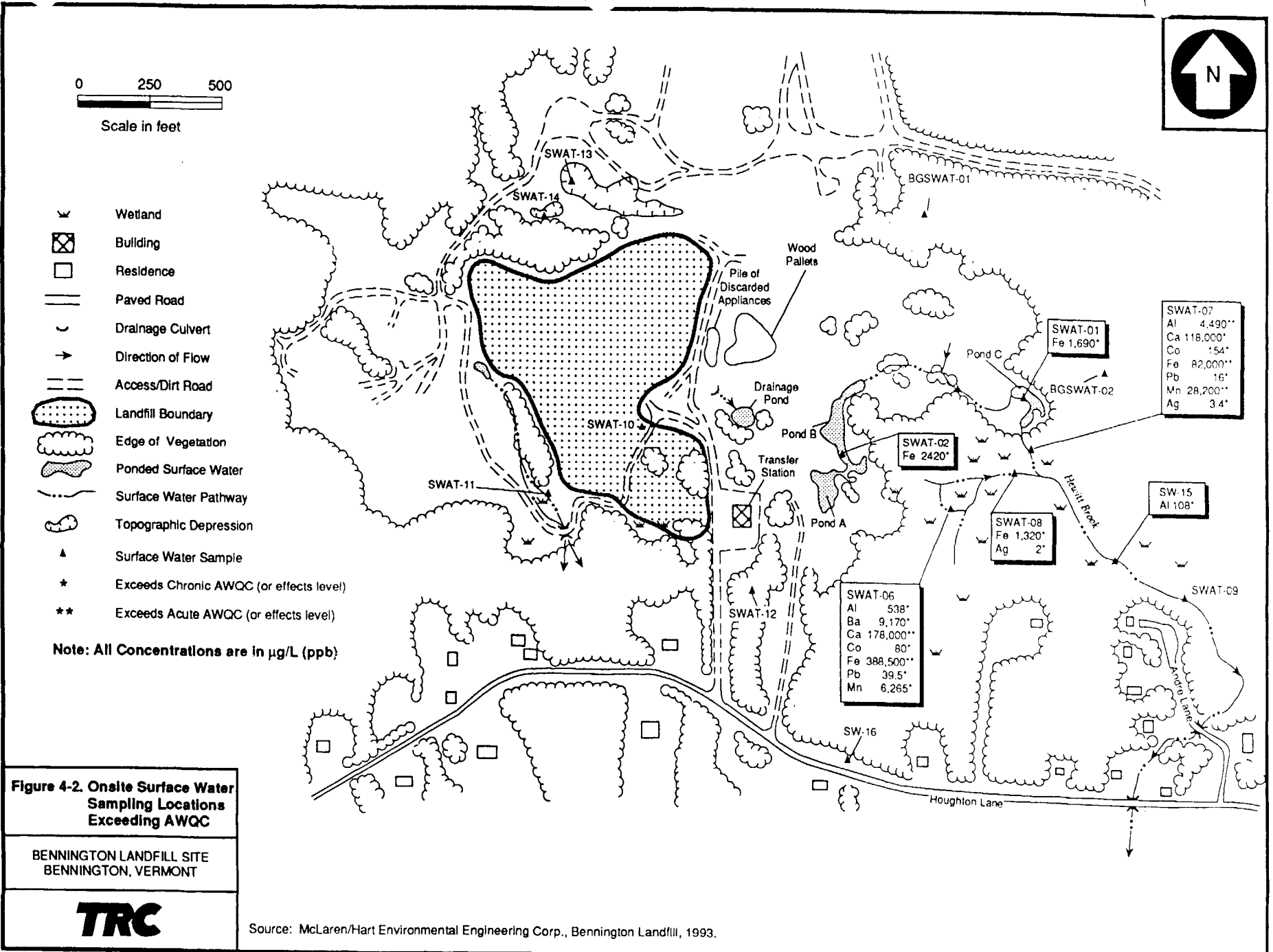
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**Figure 2-1. Groundwater Sampling Locations**

BENNINGTON LANDFILL SITE  
BENNINGTON, VERMONT

Source: McLaren/Hart Environmental Engineering Corp., Bennington Landfill, 1993.

4-55  
8

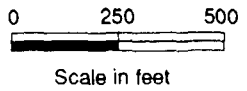


**Figure 4-2. Onsite Surface Water Sampling Locations Exceeding AWQC**

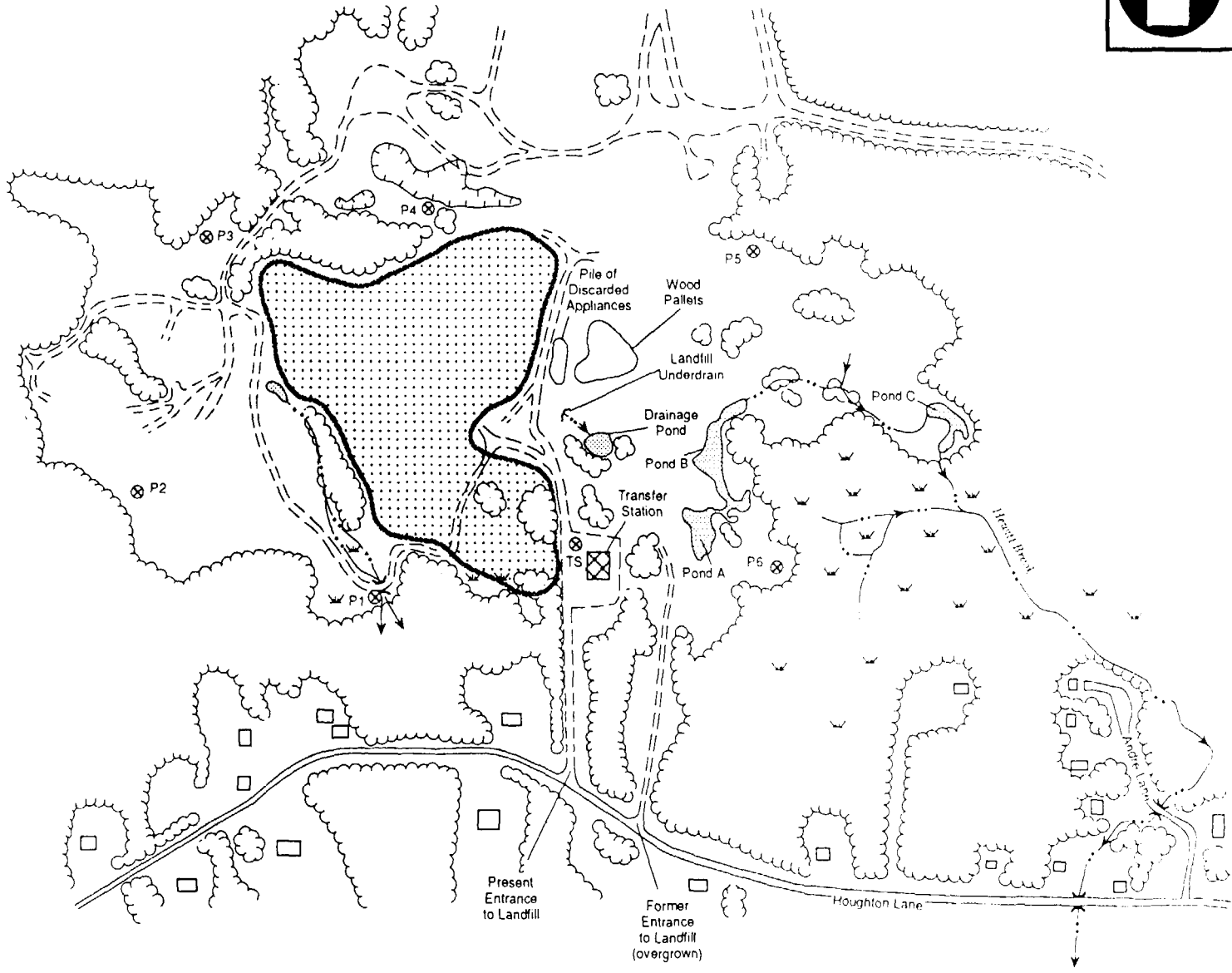
BENNINGTON LANDFILL SITE  
BENNINGTON, VERMONT



Source: McLaren/Hart Environmental Engineering Corp., Bennington Landfill, 1993.



- Wetland
- Building
- Residence
- Paved Road
- Drainage Culvert
- Direction of Flow
- Access/Dirt Road
- Landfill Boundary
- Edge of Vegetation
- Ponded Surface Water
- Surface Water Pathway
- Topographic Depression
- Air Sample

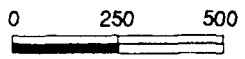
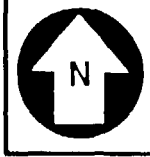


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9

**Figure 2-3. Ambient Air Sample Locations**  
 BENNINGTON LANDFILL SITE  
 BENNINGTON, VERMONT



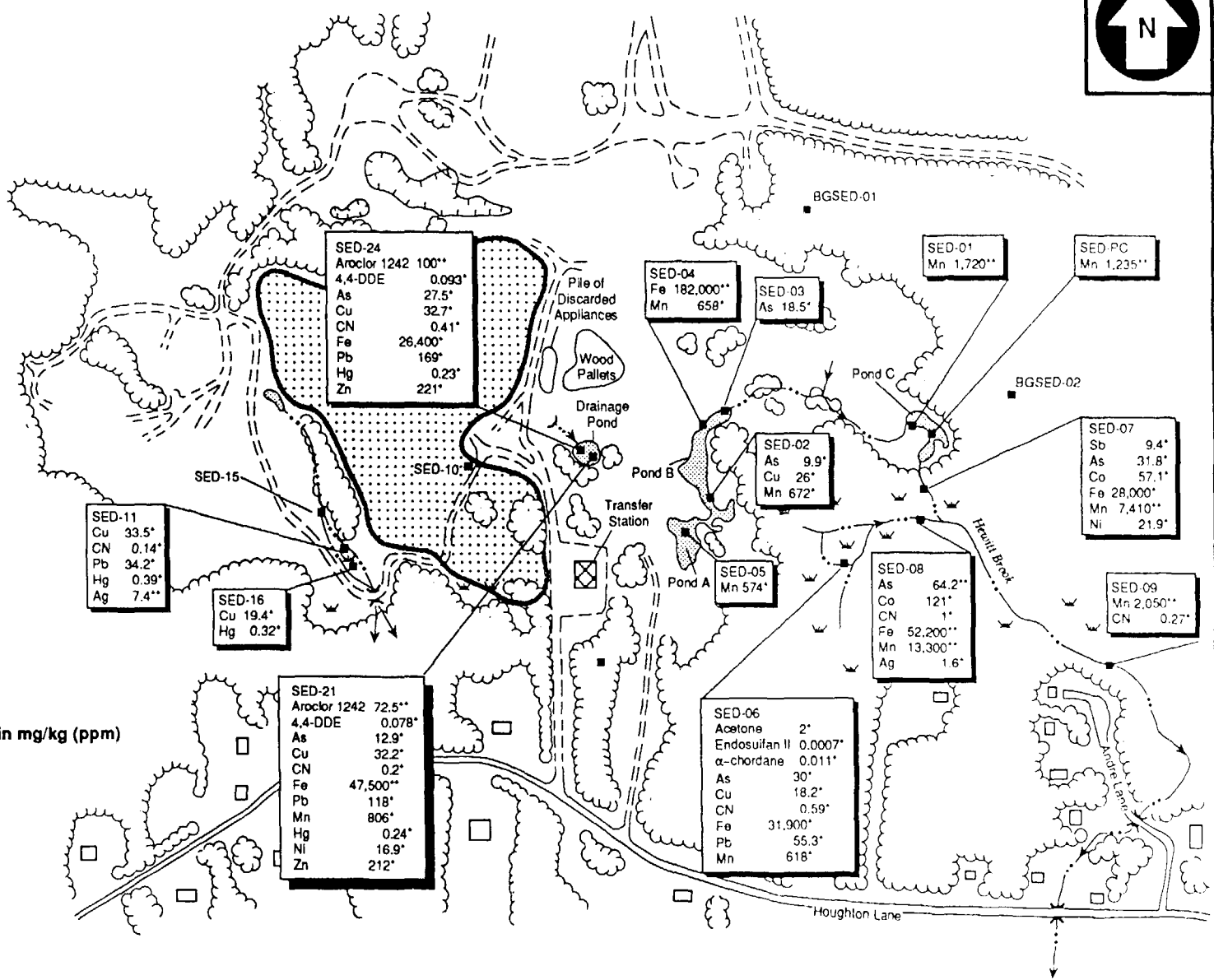
Source: McLaren/Hart Environmental Engineering Corp., Bennington Landfill, 1993.



Scale in feet

- Wetland
- Building
- Residence
- Paved Road
- Drainage Culvert
- Direction of Flow
- Access/Dirt Road
- Landfill Boundary
- Edge of Vegetation
- Ponded Surface Water
- Surface Water Pathway
- Topographic Depression
- Sediment Sample
- Exceeds LEL Guideline
- Exceeds SEL Guideline

Note: All Concentrations are in mg/kg (ppm)



4-59 10

Figure 4-3. Onsite Sediment Sampling Locations Exceeding Sediment Guidelines

BENNINGTON LANDFILL SITE  
BENNINGTON, VERMONT



Source: McLaren/Hart Environmental Engineering Corp., Bennington Landfill, 1993.

APPENDIX B

1995 Risk Assessment Tables

## APPENDIX A1

### BENNINGTON LANDFILL SUMMARY STATISTICS FOR THE HUMAN HEALTH RISK ASSESSMENT

- **Background Data (Ground Water, Surface/Subsurface Soil, Sediments, Surface Water, and Air)**
- **Overburden Ground Water Data**
- **Bedrock Ground Water Data**
- **Surface Soil/Exposed Sediment Data**
- **Sediment Underdrain Data**
- **Leachate/Landfill Underdrain (Aqueous) Data\**
- **Drainage Pond Sediment Data**
- **Pond/Brook Submerged Sediments**
- **Surface Water Data**
- **Air Data**

APPENDIX A2

BENNINGTON LANDFILL SUMMARY STATISTICS  
FOR THE ECOLOGICAL RISK ASSESSMENT

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SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=BACKGROUND SEDIMENTS -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	METHYLENE CHLORIDE	1	2	17.0000	17.0000	BGSED-01(0-6'')_9/28/92	12.50	16.000	16.00
	TOLUENE	1	2	28.0000	28.0000	BGSED-01(0-6'')_9/28/92	18.00	16.000	16.00
Pest/PCBs	4,4'-DDE	1	2	0.1500	0.1500	BGSED-01(0-6'')_9/28/92	1.42	5.400	5.40
	4,4'-DDT	1	2	0.9700	0.9700	BGSED-02(0-6'')_9/28/92	1.91	5.700	5.70
	DIELDRIN	1	2	0.3500	0.3500	BGSED-02(0-6'')_9/28/92	1.60	5.700	5.70
	ENDOSULFAN II	1	2	0.1100	0.1100	BGSED-02(0-6'')_9/28/92	1.48	5.700	5.70
	ENDRIN	1	2	0.2500	0.2500	BGSED-02(0-6'')_9/28/92	1.55	5.700	5.70
	GAMMA-BHC (LINDANE)	1	2	0.0820	0.0820	BGSED-02(0-6'')_9/28/92	0.77	2.900	2.90
Inor.	ALUMINUM	2	2	7120.0000	16000.0000	BGSED-01(0-6'')_9/28/92	11560.00	.	.
	ANTIMONY	1	2	4.7000	4.7000	BGSED-01(0-6'')_9/28/92	3.25	3.600	3.60
	ARSENIC	1	2	4.2000	4.2000	BGSED-01(0-6'')_9/28/92	2.43	1.300	1.30
	BARIUM	2	2	61.0000	105.0000	BGSED-01(0-6'')_9/28/92	83.00	.	.
	CADMIUM	1	2	2.0000	2.0000	BGSED-01(0-6'')_9/28/92	1.40	1.600	1.60
	CALCIUM	2	2	4250.0000	10200.0000	BGSED-01(0-6'')_9/28/92	7225.00	.	.
	CHROMIUM	2	2	12.3000	19.9000	BGSED-01(0-6'')_9/28/92	16.10	.	.
	COBALT	2	2	5.7000	12.9000	BGSED-01(0-6'')_9/28/92	9.30	.	.
	COPPER	2	2	6.5000	17.1000	BGSED-01(0-6'')_9/28/92	11.80	.	.
	IRON	2	2	13500.0000	27200.0000	BGSED-01(0-6'')_9/28/92	20350.00	.	.
	LEAD	1	2	14.4000	14.4000	BGSED-01(0-6'')_9/28/92	7.36	0.650	0.65
	MAGNESIUM	2	2	1750.0000	3920.0000	BGSED-01(0-6'')_9/28/92	2835.00	.	.
	MANGANESE	2	2	566.0000	754.0000	BGSED-01(0-6'')_9/28/92	660.00	.	.
	MERCURY	2	2	0.0900	0.1500	BGSED-01(0-6'')_9/28/92	0.12	.	.
	NICKEL	2	2	11.7000	19.0000	BGSED-01(0-6'')_9/28/92	15.35	.	.
	POTASSIUM	2	2	416.0000	753.0000	BGSED-01(0-6'')_9/28/92	584.50	.	.
	SODIUM	1	2	1600.0000	1600.0000	BGSED-01(0-6'')_9/28/92	802.60	10.400	10.40
	VANADIUM	2	2	12.3000	26.2000	BGSED-01(0-6'')_9/28/92	19.25	.	.
	ZINC	2	2	40.7000	75.3000	BGSED-01(0-6'')_9/28/92	58.00	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=BACKGROUND SURFACE SOIL -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	1,1,1-TRICHLOROETHANE	1	3	9.0000	9.0000	BGS-01RE(0-1')_9/28/92	7.33	12.000	14.00
BNAs	2,4-DIMETHYLPHENOL	1	3	57.0000	57.0000	BGS-03(0-1')_9/28/92	155.67	400.000	420.00
	BIS(2-ETHYLHEXYL) PHTHALATE	3	3	40.0000	60.0000	BGS-03(0-1')_9/28/92	47.33	.	.
	DI-N-BUTYLPHTHALATE	1	3	40.0000	40.0000	BGS-01(0-1')_9/28/92	160.00	420.000	460.00
Pest/PCBs	4,4'-DDE	1	3	1.1000	1.1000	BGS-02(0-1')_9/28/92	1.88	4.500	4.60
	DIELDRIN	2	3	0.0720	0.6900	BGS-01(0-1')_9/28/92	1.02	4.600	4.60
	ENDOSULFAN II	1	3	0.4500	0.4500	BGS-01(0-1')_9/28/92	1.62	4.200	4.60
	ENDOSULFAN SULFATE	1	3	0.1200	0.1200	BGS-01(0-1')_9/28/92	1.51	4.200	4.60
	ENDRIN	1	3	0.3000	0.3000	BGS-02(0-1')_9/28/92	1.53	4.000	4.60
	HEPTACHLOR EPOXIDE	2	3	0.0570	0.1800	BGS-01(0-1')_9/28/92	0.46	2.300	2.30
Inor.	ALUMINUM	3	3	3980.0000	8430.0000	BGS-03(0-1')_9/28/92	6313.33	.	.
	ARSENIC	3	3	2.7000	4.9000	BGS-03(0-1')_9/28/92	3.77	.	.
	BARIUM	3	3	43.1000	370.0000	BGS-03(0-1')_9/28/92	155.63	.	.
	CALCIUM	3	3	169.0000	15700.0000	BGS-03(0-1')_9/28/92	5559.67	.	.
	CHROMIUM	3	3	4.5000	10.2000	BGS-03(0-1')_9/28/92	7.40	.	.
	COBALT	3	3	10.2000	18.0000	BGS-02(0-1')_9/28/92	14.83	.	.
	COPPER	3	3	6.7000	15.5000	BGS-03(0-1')_9/28/92	11.83	.	.
	CYANIDE	1	3	0.5000	0.5000	BGS-03(0-1')_9/28/92	0.19	0.060	0.06
	IRON	3	3	11400.0000	21800.0000	BGS-03(0-1')_9/28/92	17000.00	.	.
	MAGNESIUM	3	3	243.0000	5890.0000	BGS-03(0-1')_9/28/92	- 2497.67	.	.
	MANGANESE	3	3	626.0000	5930.0000	BGS-03(0-1')_9/28/92	2406.00	.	.
	MERCURY	1	3	0.0900	0.0900	BGS-03(0-1')_9/28/92	0.05	0.060	0.06
	NICKEL	3	3	5.6000	14.4000	BGS-03(0-1')_9/28/92	10.07	.	.
	POTASSIUM	3	3	401.0000	541.0000	BGS-03(0-1')_9/28/92	472.00	.	.
	SILVER	1	3	0.7100	0.7100	BGS-03(0-1')_9/28/92	0.40	0.480	0.50
	SODIUM	3	3	10.9000	39.6000	BGS-03(0-1')_9/28/92	23.87	.	.
	VANADIUM	3	3	9.0000	14.7000	BGS-03(0-1')_9/28/92	11.23	.	.
	ZINC	3	3	24.9000	74.9000	BGS-03(0-1')_9/28/92	47.07	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-BACKGROUND SUBSURFACE SOILS -----									
Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
BNA#	BIS (2-ETHYLHEXYL) PHTHALATE	3	3	34.0000	45.0000	BGS-02(2-3')_9/28/92	40.00	.	.
	DI-N-BUTYLPHTHALATE	1	3	35.0000	35.0000	BGS-01(2-3')_9/28/92	136.67	370.000	380.00
Pest/PCBs	4,4'-DDE	1	3	0.3900	0.3900	BGS-01(2-3')_9/28/92	1.38	3.700	3.80
	DIELDRIN	1	3	0.1000	0.1000	BGS-01(2-3')_9/28/92	1.28	3.700	3.80
	ENDRIN	1	3	0.0720	0.0720	BGS-01(2-3')_9/28/92	1.27	3.700	3.80
Inor.	ALUMINUM	3	3	3070.0000	8980.0000	BGS-02(2-3')_9/28/92	5436.67	.	.
	ARSENIC	3	3	2.3000	4.3000	BGS-03(2-3')_9/28/92	3.43	.	.
	BARIUM	3	3	33.8000	81.8000	BGS-01(2-3')_9/28/92	55.70	.	.
	CALCIUM	3	3	236.0000	1490.0000	BGS-03(2-3')_9/28/92	656.67	.	.
	CHROMIUM	3	3	5.9000	12.4000	BGS-02(2-3')_9/28/92	8.77	.	.
	COBALT	3	3	15.3000	21.1000	BGS-02(2-3')_9/28/92	18.67	.	.
	COPPER	3	3	6.1000	24.8000	BGS-02(2-3')_9/28/92	14.47	.	.
	IRON	3	3	10900.0000	25600.0000	BGS-02(2-3')_9/28/92	18000.00	.	.
	LEAD	1	3	8.9000	8.9000	BGS-03(2-3')_9/28/92	6.77	8.500	14.30
	MAGNESIUM	3	3	360.0000	2250.0000	BGS-02(2-3')_9/28/92	1253.33	.	.
	MANGANESE	3	3	691.0000	756.0000	BGS-03(2-3')_9/28/92	731.00	.	.
	NICKEL	3	3	7.8000	18.2000	BGS-02(2-3')_9/28/92	11.87	.	.
	POTASSIUM	3	3	199.0000	686.0000	BGS-02(2-3')_9/28/92	426.00	.	.
	SODIUM	3	3	20.2000	24.3000	BGS-02(2-3')_9/28/92	22.67	.	.
	VANADIUM	3	3	6.1000	12.6000	BGS-02(2-3')_9/28/92	9.23	.	.
	ZINC	3	3	18.8000	50.6000	BGS-02(2-3')_9/28/92	33.67	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE=BACKGROUND SURFACE WATER-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Pest/PCBs	4,4'-DDT	1	2	0.0310	0.0310	BGSWAT-02_5/26/93	0.04	0.100	0.10
	ALDRIN	1	2	0.0010	0.0010	BGSWAT-02_5/26/93	0.01	0.050	0.05
	DIELDRIN	1	2	0.0070	0.0070	BGSWAT-02_5/26/93	0.03	0.100	0.10
	ENDRIN	1	2	0.0070	0.0070	BGSWAT-02_5/26/93	0.03	0.100	0.10
	GAMMA-BHC (LINDANE)	1	2	0.0030	0.0030	BGSWAT-02_5/26/93	0.01	0.050	0.05
	HEPTACHLOR	1	1	0.0030	0.0030	BGSWAT-02_5/26/93	0.00	.	.
Inor.	ALUMINUM	1	2	1740.0000	1740.0000	BGSWAT-02_5/26/93	871.75	7.000	7.00
	BARIUM	2	2	16.0000	35.6000	BGSWAT-02_5/26/93	25.80	.	.
	CALCIUM	2	2	26100.0000	69300.0000	BGSWAT-01_5/26/93	47700.00	.	.
	IRON	2	2	72.8000	2190.0000	BGSWAT-02_5/26/93	1131.40	.	.
	LEAD	1	2	5.8000	5.8000	BGSWAT-02_5/26/93	3.65	3.000	3.00
	MAGNESIUM	2	2	11500.0000	17100.0000	BGSWAT-01_5/26/93	14300.00	.	.
	MANGANESE	2	2	32.4000	230.0000	BGSWAT-02_5/26/93	131.20	.	.
	POTASSIUM	2	2	794.0000	1520.0000	BGSWAT-01_5/26/93	1157.00	.	.
	SODIUM	2	2	708.0000	18500.0000	BGSWAT-01_5/26/93	9604.00	.	.
	ZINC	2	2	7.6000	12.0000	BGSWAT-02_5/26/93	9.80	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=LEACHATE/LANDFILL UNDERDRAIN -----										
Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	ACETONE	1	1	26.0000	26.0000	LEACH(UD)-01_10/2/92	26.00	.	.	.
	BENZENE	1	1	9.5000	9.5000	LEACH(UD)-01_10/2/92	9.50	.	.	.
	CHLORO BENZENE	1	1	7.5000	7.5000	LEACH(UD)-01_10/2/92	7.50	.	.	.
	CHLOROETHANE	1	1	8.0000	8.0000	LEACH(UD)-01_10/2/92	8.00	.	.	.
	ETHYLBENZENE	1	1	16.0000	16.0000	LEACH(UD)-01_10/2/92	16.00	.	.	.
	TOLUENE	1	1	18.5000	18.5000	LEACH(UD)-01_10/2/92	18.50	.	.	.
	XYLENE (TOTAL)	1	1	68.0000	68.0000	LEACH(UD)-01_10/2/92	68.00	.	.	.
BNAs	1,2,4-TRICHLOROBENZENE	1	1	4.5000	4.5000	LEACH(UD)-01_10/2/92	4.50	.	.	.
	1,4-DICHLOROBENZENE	1	1	8.5000	8.5000	LEACH(UD)-01_10/2/92	8.50	.	.	.
	2-METHYLNAPHTHALENE	1	1	35.5000	35.5000	LEACH(UD)-01_10/2/92	35.50	.	.	.
	BENZO(A)ANTHRACENE	1	1	2.0000	2.0000	LEACH(UD)-01_10/2/92	2.00	.	.	.
	BENZO(B)FLUORANTHENE	1	1	1.0000	1.0000	LEACH(UD)-01_10/2/92	1.00	.	.	.
	BENZO(K)FLUORANTHENE	1	1	1.0000	1.0000	LEACH(UD)-01_10/2/92	1.00	.	.	.
	BIS(2-ETHYLHEXYL) PHTHALATE	1	1	44.0000	44.0000	LEACH(UD)-01_10/2/92	44.00	.	.	.
	BUTYLBENZYL PHTHALATE	1	1	6.0000	6.0000	LEACH(UD)-01_10/2/92	6.00	.	.	.
	CHRYSENE	1	1	2.5000	2.5000	LEACH(UD)-01_10/2/92	2.50	.	.	.
	DI-N-BUTYL PHTHALATE	1	1	9.0000	9.0000	LEACH(UD)-01_10/2/92	9.00	.	.	.
	NAPHTHALENE	1	1	28.5000	28.5000	LEACH(UD)-01_10/2/92	28.50	.	.	.
	4,4'-DDE	1	1	275.0000	275.0000	LEACH(UD)-01_10/2/92	275.00	.	.	.
	ALDRIN	1	1	265.0000	265.0000	LEACH(UD)-01_10/2/92	265.00	.	.	.
Pest/PCBs	AROCOR 1248	1	1	57500.0000	57500.0000	LEACH(UD)-01_10/2/92	57500.00	.	.	.
	ENDOSULFAN II	1	1	58.5000	58.5000	LEACH(UD)-01_10/2/92	58.50	.	.	.
	GAMMA-CHLORDANE	1	1	42.0000	42.0000	LEACH(UD)-01_10/2/92	42.00	.	.	.
	ALUMINUM	1	1	737.0000	737.0000	LEACH(UD)-01_10/2/92	737.00	.	.	.
Inor.	ARSENIC	1	1	158.0000	158.0000	LEACH(UD)-01_10/2/92	158.00	.	.	.
	BARIUM	1	1	2055.0000	2055.0000	LEACH(UD)-01_10/2/92	2055.00	.	.	.
	CALCIUM	1	1	80800.0000	80800.0000	LEACH(UD)-01_10/2/92	80800.00	.	.	.
	CHROMIUM	1	1	11.8000	11.8000	LEACH(UD)-01_10/2/92	11.80	.	.	.
	COBALT	1	1	12.8500	12.8500	LEACH(UD)-01_10/2/92	12.85	.	.	.
	COPPER	1	1	17.7000	17.7000	LEACH(UD)-01_10/2/92	17.70	.	.	.
	IRON	1	1	17500.0000	17500.0000	LEACH(UD)-01_10/2/92	17500.00	.	.	.
	LEAD	1	1	11.8500	11.8500	LEACH(UD)-01_10/2/92	11.85	.	.	.
	MAGNESIUM	1	1	106000.0000	106000.0000	LEACH(UD)-01_10/2/92	106000.00	.	.	.
	MANGANESE	1	1	207.0000	207.0000	LEACH(UD)-01_10/2/92	207.00	.	.	.
	NICKEL	1	1	117.0000	117.0000	LEACH(UD)-01_10/2/92	117.00	.	.	.
	POTASSIUM	1	1	320500.0000	320500.0000	LEACH(UD)-01_10/2/92	320500.00	.	.	.
	SODIUM	1	1	560500.0000	560500.0000	LEACH(UD)-01_10/2/92	560500.00	.	.	.
	VANADIUM	1	1	19.6500	19.6500	LEACH(UD)-01_10/2/92	19.65	.	.	.
	ZINC	1	1	1101.5000	1101.5000	LEACH(UD)-01_10/2/92	1101.50	.	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-DIVERSON DITCH SEDIMENTS -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	METHYLENE CHLORIDE	2	3	3.0000	4.0000	SED-15(0-6'')_4/29/93	4.67	14.000	14.00
BNAs	2,4-DIMETHYLPHENOL	1	3	420.0000	420.0000	SED-16(0-6'')_4/29/93	281.67	410.000	440.00
	4-METHYLPHENOL	1	3	420.0000	420.0000	SED-16(0-6'')_4/29/93	281.67	410.000	440.00
	BIS(2-ETHYLHEXYL) PHTHALATE	2	3	60.0000	770.0000	SED-11(0-6'')_10/6/92	345.00	410.000	410.00
	DIETHYLPHTHALATE	1	3	420.0000	420.0000	SED-16(0-6'')_4/29/93	281.67	410.000	440.00
Pest/PCBs	4,4'-DDD	1	3	0.2600	0.2600	SED-11(0-6'')_10/6/92	1.47	4.100	4.20
	4,4'-DDE	2	3	0.1100	0.8900	SED-11(0-6'')_10/6/92	1.02	4.100	4.10
	ALDRIN	2	3	0.0670	0.1400	SED-11(0-6'')_10/6/92	0.40	2.000	2.00
	DIELDRIN	1	3	0.3400	0.3400	SED-11(0-6'')_10/6/92	0.85	0.310	4.10
	ENDOSULFAN I	1	3	0.1000	0.1000	SED-11(0-6'')_10/6/92	0.72	2.000	2.10
	ENDOSULFAN II	1	3	0.2200	0.2200	SED-11(0-6'')_10/6/92	1.46	4.100	4.20
	ENDRIN ALDEHYDE	1	3	0.6200	0.6200	SED-11(0-6'')_10/6/92	1.59	4.100	4.20
	GAMMA-CHLORDANE	2	3	0.0290	0.3200	SED-11(0-6'')_10/6/92	0.45	2.000	2.00
Inor.	ALUMINUM	3	3	1770.0000	4720.0000	SED-16(0-6'')_4/29/93	3120.00	.	.
	ARSENIC	3	3	2.0000	2.3000	SED-15(0-6'')_4/29/93	2.10	.	.
	BARIUM	3	3	10.9000	62.5000	SED-11(0-6'')_10/6/92	36.83	.	.
	CALCIUM	3	3	70400.0000	99500.0000	SED-15(0-6'')_4/29/93	81500.00	.	.
	CHROMIUM	3	3	2.3000	4.8000	SED-11(0-6'')_10/6/92	3.60	.	.
	COBALT	3	3	4.3000	5.6000	SED-16(0-6'')_4/29/93	4.90	.	.
	COPPER	3	3	7.4000	33.5000	SED-11(0-6'')_10/6/92	20.10	.	.
	CYANIDE	2	3	0.1300	0.1400	SED-11(0-6'')_10/6/92	0.11	0.120	0.12
	IRON	3	3	6840.0000	12800.0000	SED-16(0-6'')_4/29/93	9590.00	.	.
	LEAD	3	3	4.5000	34.2000	SED-11(0-6'')_10/6/92	16.00	.	.
	MAGNESIUM	3	3	25000.0000	30300.0000	SED-15(0-6'')_4/29/93	28500.00	.	.
	MANGANESE	3	3	258.0000	318.0000	SED-16(0-6'')_4/29/93	291.33	.	.
	MERCURY	2	3	0.3200	0.3900	SED-11(0-6'')_10/6/92	0.24	0.010	0.01
	NICKEL	2	2	6.4000	9.2000	SED-16(0-6'')_4/29/93	7.80	.	.
	POTASSIUM	3	3	101.0000	478.0000	SED-16(0-6'')_4/29/93	288.00	.	.
	SILVER	2	3	2.6000	7.4000	SED-11(0-6'')_10/6/92	3.42	0.490	0.49
	SODIUM	2	3	29.0000	63.2000	SED-15(0-6'')_4/29/93	33.10	14.200	14.20
	VANADIUM	3	3	2.4000	6.4000	SED-16(0-6'')_4/29/93	4.30	.	.
	ZINC	3	3	18.3000	38.7000	SED-11(0-6'')_10/6/92	31.50	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE-PONDS/BROOK SEDIMENTS-----									
Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	2-BUTANONE	3	9	160.0000	530.0000	SED-06(0-6'')_10/1/92	115.42	11.000	17.00
	ACETONE	3	9	480.0000	2000.0000	SED-06(0-6'')_10/1/92	345.42	11.000	17.00
BNA	BIS(2-ETHYLHEXYL) PHTHALATE	6	9	36.0000	260.0000	SED-06(0-6'')_10/1/92	139.89	380.000	420.00
Pest/PCBs	4,4'-DDD	2	9	0.1390	0.2600	SED-01(0-6'')_9/30/92	2.01	0.460	11.00
	4,4'-DDE	3	9	0.0770	3.2000	SED-06(0-6'')_10/1/92	2.46	3.800	11.00
	4,4'-DDT	3	9	0.3050	0.3800	SED-09(0-6'')_10/1/92	1.37	0.160	11.00
	ALDRIN	1	9	0.0630	0.0630	SED-02(0-6'')_9/30/92	1.81	1.900	11.00
	ALPHA-CHLORDANE	1	9	11.0000	11.0000	SED-06(0-6'')_10/1/92	2.52	1.900	5.40
	BETA-BHC	2	9	0.4700	0.5500	SED-07(0-6'')_10/1/92	1.61	1.900	11.00
	DIELDRIN	3	9	0.0640	0.6700	SED-06(0-6'')_10/1/92	2.16	3.800	11.00
	ENDOSULFAN I	1	9	0.0430	0.0430	SED-04(0-6'')_10/1/92	1.80	1.900	11.00
	ENDOSULFAN II	1	9	0.7300	0.7300	SED-06(0-6'')_10/1/92	2.68	3.800	11.00
	HEPTACHLOR	2	9	0.0170	0.0740	SED-02(0-6'')_9/30/92	1.71	2.000	11.00
	HEPTACHLOR EPOXIDE	2	9	0.0400	0.8100	SED-06(0-6'')_10/1/92	1.28	1.900	5.40
Inor.	ALUMINUM	9	9	1440.0000	4490.0000	SED-07(0-6'')_10/1/92	2376.67	.	.
	ANTIMONY	1	9	9.4000	9.4000	SED-07(0-6'')_10/1/92	3.17	2.500	14.40
	ARSENIC	9	9	1.6000	64.2000	SED-08(0-6'')_10/1/92	18.56	.	.
	BARIUM	9	9	27.8000	4170.0000	SED-06(0-6'')_10/1/92	880.15	.	.
	CALCIUM	9	9	11200.0000	123000.0000	SED-03(0-6'')_10/1/92	58083.33	.	.
	CHROMIUM	9	9	2.9000	17.2000	SED-06(0-6'')_10/1/92	7.12	.	.
	COBALT	9	9	7.8000	121.0000	SED-08(0-6'')_10/1/92	33.22	.	.
	COPPER	9	9	5.4000	26.1000	SED-02(0-6'')_9/30/92	13.12	.	.
	CYANIDE	3	9	0.2700	1.0000	SED-08(0-6'')_10/1/92	0.25	0.060	0.44
	IRON	9	9	8400.0000	182000.0000	SED-04(0-6'')_10/1/92	39836.67	.	.
	LEAD	9	9	2.7000	55.3000	SED-06(0-6'')_10/1/92	13.23	.	.
	MAGNESIUM	9	9	3720.0000	53900.0000	SED-03(0-6'')_10/1/92	21180.00	.	.
	MANGANESE	9	9	426.0000	13300.0000	SED-08(0-6'')_10/1/92	3035.44	.	.
	NICKEL	8	9	6.3000	21.9000	SED-07(0-6'')_10/1/92	10.30	14.400	14.40
	POTASSIUM	9	9	94.9000	519.0000	SED-06(0-6'')_10/1/92	241.82	.	.
	SELENIUM	2	9	1.3000	4.8000	SED-06(0-6'')_10/1/92	1.19	0.460	6.20
	SILVER	1	9	1.6000	1.6000	SED-08(0-6'')_10/1/92	0.57	0.460	2.60
	VANADIUM	9	9	3.7000	15.1000	SED-06(0-6'')_10/1/92	6.71	.	.
	ZINC	8	9	14.2000	87.4000	SED-06(0-6'')_10/1/92	29.73	26.400	26.40

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-FIELD AREA SURFACE SOIL -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	ACETONE	1	5	27.0000	27.0000	LEACH(SS)-03(0-1')_10/2/92	10.30	12.000	13.00
	XYLENE (TOTAL)	1	5	14.0000	14.0000	SS-01(0-1')_9/30/92	7.80	12.000	13.00
BNA	BENZO(A)ANTHRACENE	1	5	44.0000	44.0000	LEACH(SS)-04(0-1')_10/2/92	331.80	390.000	2000.00
	BIS(2-ETHYLHEXYL) PHTHALATE	3	5	100.0000	1100.0000	SS-01DL(0-1')_9/30/92	371.00	390.000	420.00
	BUTYLBENZYLPHTHALATE	1	5	540.0000	540.0000	SS-01DL(0-1')_9/30/92	273.00	390.000	420.00
	DI-N-BUTYLPHTHALATE	1	5	49.0000	49.0000	LEACH(SS)-04(0-1')_10/2/92	332.80	390.000	2000.00
	FLUORANTHENE	1	5	120.0000	120.0000	LEACH(SS)-04(0-1')_10/2/92	347.00	390.000	2000.00
	PHENANTHRENE	1	5	73.0000	73.0000	LEACH(SS)-04(0-1')_10/2/92	337.60	390.000	2000.00
	PYRENE	2	5	70.0000	500.0000	SS-01DL(0-1')_9/30/92	237.00	390.000	420.00
Post/PCBs	4,4'-DDD	1	5	0.1700	0.1700	SS-150NNW(0-1')_10/5/92	1.54	3.600	3.90
	4,4'-DDE	3	5	0.2500	3.9000	SS-01(0-1')_9/30/92	1.64	3.600	3.70
	4,4'-DDT	2	5	0.9800	6.8000	SS-01(0-1')_9/30/92	2.01	0.320	3.60
	ALDRIN	1	4	1.9000	1.9000	SS-01(0-1')_9/30/92	0.97	0.330	1.80
	AROCLOR 1016	2	10	4000.0000	6400.0000	SS-75NNW35W(0-1')_4/28/93	1079.30	36.000	370.00
	AROCLOR 1248	3	10	67.0000	11000.0000	SS-75NNW(0-1')_4/28/93	1348.15	36.000	430.00
	DIELDRIN	1	4	2.7000	2.7000	SS-01(0-1')_9/30/92	1.86	1.900	3.90
	ENDOSULFAN I	1	5	8.9000	8.9000	SS-01(0-1')_9/30/92	2.34	0.140	1.90
	ENDOSULFAN II	4	5	0.1300	3.9000	SS-01(0-1')_9/30/92	1.57	3.900	3.90
	ENDRIN	1	5	0.0610	0.0610	SS-50E(0-1')_10/5/92	1.13	0.250	3.90
	ENDRIN KETONE	1	5	9.5000	9.5000	SS-01(0-1')_9/30/92	4.92	3.600	13.00
	GAMMA-CHLORDANE	1	3	2.4000	2.4000	SS-01(0-1')_9/30/92	1.40	1.800	1.80
	HEPTACHLOR EPOXIDE	1	3	2.4000	2.4000	SS-01(0-1')_9/30/92	1.42	1.800	1.90
	METHOXYCHLOR	2	5	2.9000	14.0000	SS-01(0-1')_9/30/92	8.98	18.000	13.00
Inor.	ALUMINUM	5	5	3220.0000	8080.0000	LEACH(SS)-03(0-1')_10/2/92	4766.00	.	.
	ARSENIC	3	5	1.7000	4.5000	SS-01(0-1')_9/30/92	2.10	1.000	1.00
	BARIUM	5	5	23.4000	109.0000	LEACH(SS)-03(0-1')_10/2/92	50.74	.	.
	BERYLLIUM	1	5	0.7400	0.7400	LEACH(SS)-03(0-1')_10/2/92	0.27	0.230	0.45
	CADMIUM	1	5	1.4000	1.4000	SED-10(0-6'')_10/2/92	0.78	1.200	1.30
	CALCIUM	5	5	8270.0000	119000.000	LEACH(SS)-04(0-1')_10/2/92	55794.00	.	.
	CHROMIUM	5	5	2.7000	9.7000	LEACH(SS)-03(0-1')_10/2/92	6.48	.	.
	COBALT	5	5	6.6000	62.8000	SED-10(0-6'')_10/2/92	19.18	.	.
	COPPER	5	5	11.8000	53.4000	SED-10(0-6'')_10/2/92	27.46	.	.
	IRON	5	5	13100.0000	39600.0000	LEACH(SS)-03(0-1')_10/2/92	22720.00	.	.
	LEAD	5	5	6.2000	52.1000	SS-01(0-1')_9/30/92	21.38	.	.
	MAGNESIUM	5	5	4830.0000	44300.0000	LEACH(SS)-04(0-1')_10/2/92	19804.00	.	.
	MANGANESE	5	5	344.0000	1140.0000	SED-10(0-6'')_10/2/92	599.80	.	.
	MERCURY	1	5	0.0700	0.0700	SED-10(0-6'')_10/2/92	0.04	0.060	0.06
	NICKEL	5	5	8.8000	20.8000	LEACH(SS)-03(0-1')_10/2/92	13.70	.	.
	POTASSIUM	5	5	161.0000	834.0000	LEACH(SS)-03(0-1')_10/2/92	457.80	.	.
	THALLIUM	1	5	0.7500	0.7500	LEACH(SS)-04(0-1')_10/2/92	0.44	0.700	0.76
	VANADIUM	5	5	5.7000	10.9000	LEACH(SS)-03(0-1')_10/2/92	7.52	.	.
	ZINC	5	5	28.1000	84.1000	LEACH(SS)-02(0-1')_10/2/92	59.40	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-WOODED AREA SURFACE SOIL -----										
Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	TOLUENE	3	5	5.0000	9.0000	SS-02(0-1')_10/5/92	6.90	12.000	19.00	
BNAs	BENZO(G, H, I) PERYLENE	1	5	66.0000	66.0000	SS-05(0-1')_10/6/92	189.20	420.000	500.00	
	BIS(2-ETHYLHEXYL) PHTHALATE	5	5	47.0000	85.0000	SS-05(0-1')_10/6/92	61.60	.	.	
	BUTYLBENZYL PHTHALATE	1	5	55.0000	55.0000	SS-03(0-1')_10/5/92	207.00	420.000	520.00	
	NAPHTHALENE	1	5	96.0000	96.0000	SS-05(0-1')_10/6/92	195.20	420.000	500.00	
	PHENANTHRENE	1	5	75.0000	75.0000	SS-05(0-1')_10/6/92	191.00	420.000	500.00	
	PYRENE	1	5	75.0000	75.0000	SS-05(0-1')_10/6/92	191.00	420.000	500.00	
Pest/PCBs	4,4'-DDD	1	5	0.1900	0.1900	SS-02(0-1')_10/5/92	1.92	4.200	6.20	
	4,4'-DDE	5	5	0.2700	2.0000	SS-04(0-1')_10/6/92	1.05	.	.	
	ALDRIN	3	4	0.3400	1.7000	SS-04(0-1')_10/6/92	1.17	2.500	2.50	
	ALPHA-CHLORDANE	2	5	0.1800	0.4400	SS-03(0-1')_10/7/92	0.89	2.100	3.10	
	AROCLOR 1248	4	5	42.0000	200.0000	SS-03(0-1')_10/7/92	111.80	50.000	50.00	
	DELTA-BHC	2	5	0.1600	0.2700	SS-02(0-1')_10/5/92	0.82	2.100	3.10	
	ENDOSULFAN I	1	5	0.0740	0.0740	SS-02(0-1')_10/5/92	0.95	2.100	3.10	
	ENDOSULFAN II	4	5	0.1360	0.5200	SS-04(0-1')_10/6/92	0.87	6.200	6.20	
	ENDOSULFAN SULPATE	1	5	0.2400	0.2400	SS-02(0-1')_10/5/92	1.93	4.200	6.20	
	ENDRIN	3	5	0.0440	0.5400	SS-03(0-1')_10/7/92	1.25	4.200	6.20	
	ENDRIN ALDEHYDE	2	5	0.2600	0.3700	SS-02(0-1')_10/5/92	1.59	4.200	6.20	
	ENDRIN KETONE	2	5	0.2000	1.7000	SS-04(0-1')_10/6/92	1.84	4.200	6.20	
	GAMMA-CHLORDANE	4	5	0.0350	0.7900	SS-04(0-1')_10/6/92	0.39	0.290	0.29	
	Inor.	ALUMINUM	5	5	1170.0000	6195.0000	SS-02(0-1')_10/5/92	3929.00	.	.
		ARSENIC	5	5	1.6000	4.5000	SS-05(0-1')_10/6/92	3.06	.	.
BARIUM		5	5	11.9000	188.0000	SS-05(0-1')_10/6/92	55.78	.	.	
CALCIUM		5	5	4560.0000	73200.0000	SS-04(0-1')_10/6/92	34103.00	.	.	
CHROMIUM		5	5	3.8000	7.5000	SS-05(0-1')_10/6/92	5.59	.	.	
COBALT		5	5	5.1000	15.5000	SS-05(0-1')_10/6/92	8.90	.	.	
COPPER		5	5	6.5000	13.9000	SS-05(0-1')_10/6/92	10.90	.	.	
CYANIDE		5	5	0.1100	0.6200	SS-05(0-1')_10/6/92	0.31	.	.	
IRON		5	5	5250.0000	26200.0000	SS-05(0-1')_10/6/92	13270.00	.	.	
LEAD		4	4	9.0000	41.1000	SS-05(0-1')_10/6/92	22.08	.	.	
MAGNESIUM		5	5	1760.0000	24800.0000	SS-04(0-1')_10/6/92	12024.00	.	.	
MANGANESE		5	5	226.0000	2380.0000	SS-05(0-1')_10/6/92	968.40	.	.	
MERCURY		4	5	0.0700	0.2000	SS-05(0-1')_10/6/92	0.11	0.060	0.06	
NICKEL		4	4	3.1000	8.5000	SS-05(0-1')_10/6/92	5.72	.	.	
POTASSIUM		5	5	88.3000	305.0000	SS-05(0-1')_10/6/92	219.96	.	.	
SELENIUM		2	5	0.6100	0.7800	SS-02(0-1')_10/5/92	0.45	0.500	0.70	
SILVER		1	1	0.7200	0.7200	SS-03(0-1')_10/5/92	0.72	.	.	
VANADIUM		5	5	1.8000	8.2000	SSD-12(0-6')_10/6/92	5.86	.	.	
ZINC		5	5	41.9000	513.0000	SS-04(0-1')_10/6/92	150.70	.	.	

SUMMARY STATISTICS FOR THE BURNING SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOILS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-SURFACE SOILS - SOUTH OF LANDFILL -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Pest/PCBs	AROCOLOR 1248	2	8	60.0000	310.0000	SS-12_04/18/94	52.625	17.000	17.000



SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-DIVERSON DITCH SURFACE WATER -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	1	2	73.0000	73.0000	SWAT-12_4/30/93	42.48	23.900	23.90
	BARIUM	2	2	20.9000	74.4000	SWAT-11_4/30/93	47.65	.	.
	CALCIUM	2	2	61300.0000	96900.0000	SWAT-11_4/30/93	79100.00	.	.
	CHROMIUM	1	2	7.6000	7.6000	SWAT-12_4/30/93	5.55	7.000	7.00
	IRON	2	2	66.2000	589.0000	SWAT-11_4/30/93	327.60	.	.
	MAGNESIUM	2	2	13900.0000	22300.0000	SWAT-11_4/30/93	18100.00	.	.
	MANGANESE	2	2	15.5000	380.0000	SWAT-11_4/30/93	197.75	.	.
	POTASSIUM	2	2	1680.0000	2630.0000	SWAT-11_4/30/93	2155.00	.	.
	SODIUM	2	2	5720.0000	8340.0000	SWAT-12_4/30/93	7030.00	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=PONDS/BROOK SURFACE WATER -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	ACETONE	1	6	10.0000	10.0000	SWAT-07_10/1/92	5.83	10.000	10.00
	CARBON DISULFIDE	1	6	13.0000	13.0000	SWAT-07_10/1/92	5.75	3.000	10.00
Pest/PCBs	4,4'-DDD	3	6	0.0020	0.0065	SWAT-06_10/1/92	0.01	0.004	0.12
	DIELDRIN	2	6	0.0010	0.0010	SWAT-01_9/30/92	0.04	0.100	0.12
	GAMMA-CHLORDANE	2	6	0.0010	0.0020	SWAT-01_9/30/92	0.02	0.050	0.06
	METHOXYCHLOR	1	6	0.0090	0.0090	SWAT-06_10/1/92	0.18	0.050	0.62
Inor.	ALUMINUM	3	6	39.2000	4490.0000	SWAT-07_10/1/92	853.87	37.000	37.00
	ARSENIC	3	6	25.3000	116.4000	SWAT-06_10/1/92	30.62	4.000	4.00
	BARIUM	6	6	227.0000	9170.0000	SWAT-06_10/1/92	2262.50	.	.
	CALCIUM	6	6	78400.0000	178000.0000	SWAT-06_10/1/92	108500.00	.	.
	CHROMIUM	1	6	10.3000	10.3000	SWAT-07_10/1/92	5.47	9.000	9.00
	COBALT	3	6	5.0000	154.0000	SWAT-07_10/1/92	40.82	4.000	4.00
	COPPER	2	6	13.7000	17.5000	SWAT-07_10/1/92	6.20	3.000	3.00
	CYANIDE	1	6	2.7000	2.7000	SWAT-06_10/1/92	0.97	1.000	2.30
	IRON	6	6	158.0000	388500.0000	SWAT-06_10/1/92	79348.00	.	.
	LEAD	2	6	16.0000	39.5000	SWAT-06_10/1/92	10.58	2.000	10.00
	MAGNESIUM	6	6	21700.0000	34300.0000	SWAT-06_10/1/92	29883.33	.	.
	MANGANESE	6	6	32.7000	28200.0000	SWAT-07_10/1/92	5929.62	.	.
	NICKEL	2	6	14.0000	30.3000	SWAT-07_10/1/92	11.05	11.000	11.00
	ORGANIC CARBON, TOTAL	4	4	2.9000	10.2000	SWAT-06_10/1/92	5.92	.	.
	POTASSIUM	6	6	4040.0000	35100.0000	SWAT-02_9/30/92	15230.00	.	.
	SILVER	2	6	2.0000	3.4000	SWAT-07_10/1/92	6.57	2.000	62.00
	SODIUM	6	6	7500.0000	53500.0000	SWAT-02_9/30/92	27633.33	.	.
	TOTAL HARDNESS AS CaCO3	4	4	271.0000	370.0000	SWAT-06_10/1/92	329.25	.	.
	VANADIUM	2	6	11.6000	12.5000	SWAT-06_10/1/92	5.35	4.000	4.00
	ZINC	2	6	43.6000	81.9000	SWAT-06_10/1/92	23.58	8.000	8.00

SUMMARY STATISTICS FOR THE BENNING SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOLIDS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE=PHASE 1B SURFACE WATER-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	1	2	108.0000	108.0000	SW-16T_05/19/94	56.750	11.000	11.000
	BARIUM	2	2	36.8000	762.0000	SW-15T_05/19/94	399.400	.	.
	CALCIUM	2	2	74900.0000	91900.0000	SW-16T_05/19/94	83400.000	.	.
	CYANIDE	1	2	2.0000	2.0000	SW-16T_05/19/94	1.500	2.000	2.000
	IRON	2	2	141.0000	344.0000	SW-15T_05/19/94	242.500	.	.
	MAGNESIUM	2	2	18700.0000	24600.0000	SW-15T_05/19/94	21650.000	.	.
	MANGANESE	2	2	14.5000	92.0000	SW-15T_05/19/94	53.250	.	.
	POTASSIUM	2	2	3300.0000	11600.0000	SW-15T_05/19/94	7450.000	.	.
	SODIUM	2	2	5580.0000	20700.0000	SW-15T_05/19/94	13140.000	.	.

SUMMARY STATISTICS FOR THE BENNING ( (TE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL ( LTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-PHASE 1B SURFACE WATER - FILTERED -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	2	2	13.7000	15.6000	SW-16D_05/19/94	14.650	.	.
	BARIUM	2	2	37.9000	757.0000	SW-15D_05/19/94	397.450	.	.
	CALCIUM	2	2	75100.0000	91800.0000	SW-16D_05/19/94	83450.000	.	.
	IRON	2	2	8.3000	68.6000	SW-15D_05/19/94	38.450	.	.
	MAGNESIUM	2	2	18800.0000	24600.0000	SW-15D_05/19/94	21700.000	.	.
	MANGANESE	2	2	6.7000	69.2000	SW-15D_05/19/94	37.950	.	.
	POTASSIUM	2	2	3430.0000	11600.0000	SW-15D_05/19/94	7515.000	.	.
	SODIUM	2	2	5640.0000	20800.0000	SW-15D_05/19/94	13220.000	.	.
	ZINC	2	2	7.4000	8.3000	SW-15D_05/19/94	7.850	.	.

SUMMARY STATISTICS THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE=DRAINAGE POND SEDIMENTS-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	ACETONE	2	2	115.0000	1100.0000	SED-24	607.500	.	.
	TOLUENE	1	2	6.0000	6.0000	SED-21	33.000	120.000	120.000
BNA	1,4-DICHLOROBENZENE	1	2	110.0000	110.0000	SED-24	203.750	595.000	595.000
	2-METHYLNAPHTHALENE	1	2	91.0000	91.0000	SED-24	194.250	595.000	595.000
	BENZO(A)ANTHRACENE	1	2	120.0000	120.0000	SED-24	208.750	595.000	595.000
	BENZO(A)PYRENE	1	2	100.0000	100.0000	SED-24	198.750	595.000	595.000
	BENZO(B)FLUORANTHENE	1	2	230.0000	230.0000	SED-24	263.750	595.000	595.000
	CHRYSENE	1	2	140.0000	140.0000	SED-24	218.750	595.000	595.000
	DI-N-BUTYLPHTHALATE	1	2	78.0000	78.0000	SED-21	236.500	790.000	790.000
	FLUORANTHENE	1	2	260.0000	260.0000	SED-24	278.750	595.000	595.000
	N-NITROSO-DI-N-PROPYLAMINE	1	2	310.0000	310.0000	SED-24	303.750	595.000	595.000
	NAPHTHALENE	1	2	140.0000	140.0000	SED-24	218.750	595.000	595.000
	PYRENE	1	2	260.0000	260.0000	SED-24	278.750	595.000	595.000
Pest/PCBs	4,4'-DDE	2	2	78.0000	93.0000	SED-24	85.500	.	.
	AROCLOR 1242	2	2	72500.0000	100000.0000	SED-24	86250.000	.	.
Inor.	ALUMINUM	2	2	5680.0000	9610.0000	SED-21	7645.000	.	.
	ARSENIC	2	2	12.9000	27.5000	SED-24	20.200	.	.
	BARIUM	2	2	508.0000	508.0000	SED-21	508.000	.	.
	BERYLLIUM	1	2	0.3950	0.3950	SED-21	0.318	0.480	0.480
	CALCIUM	2	2	37400.0000	70300.0000	SED-21	53850.000	.	.
	CHROMIUM	2	2	12.7000	16.5000	SED-21	14.600	.	.
	COBALT	2	2	7.0000	12.1500	SED-21	9.575	.	.
	COPPER	2	2	32.2000	32.7000	SED-24	32.450	.	.
	CYANIDE	2	2	0.2000	0.4100	SED-24	0.305	.	.
	IRON	2	2	26400.0000	47500.0000	SED-21	36950.000	.	.
	LEAD	2	2	118.5000	169.0000	SED-24	143.750	.	.
	MAGNESIUM	2	2	10700.0000	17500.0000	SED-21	14100.000	.	.
	MANGANESE	2	2	338.0000	806.5000	SED-21	572.250	.	.
	MERCURY	2	2	0.2300	0.2400	SED-21	0.235	.	.
	NICKEL	2	2	12.3000	16.9000	SED-21	14.600	.	.
	POTASSIUM	2	2	1930.0000	2000.0000	SED-21	1965.000	.	.
	SODIUM	2	2	632.5000	1110.0000	SED-24	871.250	.	.
	VANADIUM	2	2	13.7000	15.3000	SED-21	14.500	.	.
	ZINC	2	2	212.5000	221.0000	SED-24	216.750	.	.

SUMMARY STATISTICS FOR THE BENNING ITR - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL JLTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-PHASE 1B SUBMERGED SEDIMENTS -----

Class	NAME	Num.	Num.	Lowest	Highest	Highest	Arithmetic	Lowest	Highest
		Times	Samples	Detected	Detected	Conc.		Observed	Observed
		Detected	Analyzed	Conc.	Conc.	Locat.	Mean	Detect. Limit	Detect. Limit
Inor.	ALUMINUM	1	1	2080.0000	2080.0000	SD-PC_05/04/94	2080.000	.	.
	ARSENIC	1	1	5.2500	5.2500	SD-PC_05/04/94	5.250	.	.
	BARIUM	1	1	84.4500	84.4500	SD-PC_05/04/94	84.450	.	.
	CALCIUM	1	1	37550.0000	37550.0000	SD-PC_05/04/94	37550.000	.	.
	CHROMIUM	1	1	4.6000	4.6000	SD-PC_05/04/94	4.600	.	.
	COBALT	1	1	10.8000	10.8000	SD-PC_05/04/94	10.800	.	.
	COPPER	1	1	7.6500	7.6500	SD-PC_05/04/94	7.650	.	.
	IRON	1	1	12100.0000	12100.0000	SD-PC_05/04/94	12100.000	.	.
	LEAD	1	1	6.3000	6.3000	SD-PC_05/04/94	6.300	.	.
	MAGNESIUM	1	1	17950.0000	17950.0000	SD-PC_05/04/94	17950.000	.	.
	MANGANESE	1	1	1235.0000	1235.0000	SD-PC_05/04/94	1235.000	.	.
	NICKEL	1	1	8.6500	8.6500	SD-PC_05/04/94	8.650	.	.
	POTASSIUM	1	1	246.5000	246.5000	SD-PC_05/04/94	246.500	.	.
	VANADIUM	1	1	3.9000	3.9000	SD-PC_05/04/94	3.900	.	.
	ZINC	1	1	21.7500	21.7500	SD-PC_05/04/94	21.750	.	.



TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/OVERBURDEN  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Maximum Contaminant Level (MCL) (a) (mg/L)	Maximum Concentration (mg/L)	Exposure Factor (b)	Maximum Ingested Dose (c) (mg/kg/day)	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Maximum Increased CA Risk
1,1,1-TRICHLOROETHANE	D	2.00E-01	6.60E-01	1.17E-02	7.75E-03		
1,1-DICHLOROETHANE	C	--	1.80E+00	1.17E-02	2.11E-02		
1,1-DICHLOROETHENE	C	7.00E-03	3.00E-02	1.17E-02	3.52E-04	6.00E-01	2E-04
1,2-DICHLOROETHENE (TOTAL)	D	7.00E-02	4.05E+00	1.17E-02	4.76E-02		
ACETONE	D	--	1.80E-01	1.17E-02	2.11E-03		
BENZENE	A	5.00E-03	2.50E-02	1.17E-02	2.94E-04	2.90E-02	9E-06
CHLOROENZENE	D	--	7.00E-03	1.17E-02	8.22E-05		
CHLOROETHANE	B2	--	1.50E-01	1.17E-02	1.76E-03	2.90E-03	5E-06
ETHYLBENZENE	D	7.00E-01	2.00E-01	1.17E-02	2.35E-03		
METHYLENE CHLORIDE	B2	--	1.80E-01	1.17E-02	2.11E-03	7.50E-03	2E-05
TETRACHLOROETHENE	B2-C	5.00E-03	7.00E-02	1.17E-02	8.22E-04	5.20E-02	4E-05
TOLUENE	D	1.00E+00	1.65E+00	1.17E-02	1.94E-02		
TRICHLOROETHENE	B2-C	5.00E-03	5.30E-02	1.17E-02	6.22E-04	1.10E-02	7E-06
VINYL CHLORIDE	A	2.00E-03	9.50E-02	1.17E-02	1.12E-03	1.90E+00	2E-03
XYLENE (TOTAL)	D	1.00E+01	4.90E-02	1.17E-02	5.75E-04		
1,2,4-TRIMETHYLBENZENE	D	--	2.00E-02	1.17E-02	2.35E-04		
1,4-DICHLOROENZENE	C	7.50E-02	2.00E-03	1.17E-02	2.35E-05	2.40E-02	6E-07
1,3,5-TRIMETHYLBENZENE	D	--	1.20E-02	1.17E-02	1.41E-04		
2-METHYLPHENOL	C	--	6.25E-02	1.17E-02	7.34E-04		
4-METHYLPHENOL	C	--	1.15E-01	1.17E-02	1.35E-03		
BIS(2-ETHYLHEXYL)PHTHALATE	B2	6.00E-03	3.00E-03	1.17E-02	3.52E-05	1.40E-02	5E-07
DI-N-BUTYLPHTHALATE	D	--	1.00E-03	1.17E-02	1.17E-05		
4,4'-DDD	B2	--	1.00E-05	1.17E-02	1.17E-07	2.40E-01	3E-08
4,4'-DDT	B2	--	1.90E-05	1.17E-02	2.23E-07	3.40E-01	8E-08
ALDRIN	B2	--	2.00E-06	1.17E-02	2.35E-08	1.70E+01	4E-07
AROCLOR 1221	B2	5.00E-04	7.30E-03	1.17E-02	8.57E-05	7.70E+00	7E-04
DIELDRIN	B2	--	1.00E-05	1.17E-02	1.17E-07	1.60E+01	2E-06
ENDRIN	D	2.00E-03	4.00E-06	1.17E-02	4.70E-08		
HEPTACHLOR	B2	4.00E-04	5.00E-06	1.17E-02	5.87E-08	4.50E+00	3E-07
ALUMINUM	D	--	1.02E+02	1.17E-02	1.20E+00		
ARSENIC	A	5.00E-02	1.71E-02	1.17E-02	2.01E-04	1.75E+00	4E-04
BARIUM	--	2.00E+00	4.27E+00	1.17E-02	5.01E-02		
BERYLLIUM	B2	4.00E-03	5.40E-03	1.17E-02	6.34E-05	4.30E+00	3E-04
CHROMIUM	A	1.00E-01	1.45E-01	1.17E-02	1.70E-03		
COBALT	--	--	2.90E-01	1.17E-02	3.41E-03		
COPPER	D	1.30E+00	3.22E-01	1.17E-02	3.78E-03		
CYANIDE	D	2.00E-01	5.00E-03	1.17E-02	5.87E-05		
IRON	D	--	2.86E+02	1.17E-02	3.36E+00		
LEAD	B2	1.50E-02	1.20E-01	1.17E-02	1.41E-03		
MANGANESE	D	--	2.30E+01	1.17E-02	2.70E-01		
MERCURY	D	2.00E-03	5.20E-04	1.17E-02	6.11E-06		
NICKEL	A	1.00E-01	2.47E-01	1.17E-02	2.90E-03		
VANADIUM	D	--	1.43E-01	1.17E-02	1.68E-03		
ZINC	D	--	6.14E-01	1.17E-02	7.21E-03		
<b>TOTAL RISK</b>							<b>4E-03</b>

-- Not available  
 a U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories. December 1993.  
 b Exposure Factor = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 70 years \* 365 days/year) = 1.17 E-02  
 c Ingested Dose = Concentration\*Exposure Factor

TABLE 1a  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/OVERBURDEN (Average Plume Concentration)  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Maximum Contaminant Level (MCL) (a) (mg/L)	Average Concentration (mg/L)	Exposure Factor (b)	Average Ingested Dose (c) (mg/kg/day)	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk
1,1,1-TRICHLOROETHANE	D	2.00E-01	8.62E-02	1.17E-02	1.01E-03		
1,1-DICHLOROETHANE	C	--	2.63E-01	1.17E-02	3.09E-03		
1,1-DICHLOROETHENE	C	7.00E-03	7.98E-03	1.17E-02	9.37E-05	6.00E-01	6E-05
1,2-DICHLOROETHENE (TOTAL)	D	7.00E-02	3.89E-01	1.17E-02	4.57E-03		
ACETONE	D	--	2.21E-02	1.17E-02	2.60E-04		
BENZENE	A	5.00E-03	8.47E-03	1.17E-02	9.95E-05	2.90E-02	3E-06
CHLOROBENZENE	D	--	6.80E-03	1.17E-02	7.98E-05		
CHLOROETHANE	B2	--	3.16E-02	1.17E-02	3.71E-04	2.90E-03	1E-06
ETHYLBENZENE	D	7.00E-01	1.17E-02	1.17E-02	1.37E-04		
METHYLENE CHLORIDE	B2	--	2.53E-02	1.17E-02	2.96E-04	7.50E-03	2E-06
TETRACHLOROETHENE	B2-C	5.00E-03	1.01E-02	1.17E-02	1.18E-04	5.20E-02	6E-06
TOLUENE	D	1.00E+00	1.12E-01	1.17E-02	1.32E-03		
TRICHLOROETHENE	B2-C	5.00E-03	9.96E-03	1.17E-02	1.17E-04	1.10E-02	1E-06
VINYL CHLORIDE	A	2.00E-03	1.48E-02	1.17E-02	1.73E-04	1.90E+00	3E-04
XYLENE (TOTAL)	D	1.00E+01	1.10E-02	1.17E-02	1.29E-04		
1,2,4-TRIMETHYLBENZENE	D	--	4.03E-03	1.17E-02	4.73E-05		
1,4-DICHLOROBENZENE	C	7.50E-02	2.25E-03	1.17E-02	2.64E-05	2.40E-02	6E-07
1,3,5-TRIMETHYLBENZENE	D	--	2.91E-03	1.17E-02	3.42E-05		
2-METHYLPHENOL	C	--	9.48E-03	1.17E-02	1.11E-04		
4-METHYLPHENOL	C	--	1.29E-02	1.17E-02	1.52E-04		
BIS(2-ETHYLHEXYL)PHTHALATE	B2	6.00E-03	4.86E-03	1.17E-02	5.71E-05	1.40E-02	8E-07
DI-N-BUTYLPHTHALATE	D	--	4.44E-03	1.17E-02	5.22E-05		
4,4'-DDT	B2	--	3.10E-05	1.17E-02	3.64E-07	3.40E-01	1E-07
ALDRIN	B2	--	2.40E-05	1.17E-02	2.82E-07	1.70E+01	5E-06
AROCLOR 1221	B2	5.00E-04	1.58E-03	1.17E-02	1.85E-05	7.70E+00	1E-04
DELDRIN	B2	--	4.10E-05	1.17E-02	4.81E-07	1.60E+01	8E-06
ENDRIN	D	2.00E-03	4.10E-05	1.17E-02	4.81E-07		
HEPTACHLOR	B2	4.00E-04	2.00E-05	1.17E-02	2.35E-07	4.50E+00	1E-06
ALUMINUM	D	--	9.11E+00	1.17E-02	1.07E-01		
ARSENIC	A	5.00E-02	7.67E-03	1.17E-02	9.01E-05	1.75E+00	2E-04
BARIUM	--	2.00E+00	1.51E+00	1.17E-02	1.77E-02		
BERYLLIUM	B2	4.00E-03	9.59E-04	1.17E-02	1.13E-05	4.30E+00	5E-05
CHROMIUM	A	1.00E-01	2.37E-02	1.17E-02	2.79E-04		
COBALT	--	--	6.78E-02	1.17E-02	7.96E-04		
COPPER	D	1.30E+00	4.32E-02	1.17E-02	5.07E-04		
CYANIDE	D	2.00E-01	1.98E-03	1.17E-02	2.33E-05		
IRON	D	--	4.17E+01	1.17E-02	4.90E-01		
LEAD	B2	1.50E-02	2.09E-02	1.17E-02	2.45E-04		
MANGANESE	D	--	3.66E+00	1.17E-02	4.30E-02		
MERCURY	D	2.00E-03	1.15E-04	1.17E-02	1.35E-06		
NICKEL	A	1.00E-01	4.93E-02	1.17E-02	5.79E-04		
VANADIUM	D	--	1.78E-02	1.17E-02	2.09E-04		
ZINC	D	--	6.44E-02	1.17E-02	7.56E-04		
<b>TOTAL RISK</b>							<b>8E-04</b>

-- Not available  
 a U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories, December 1993.  
 b Exposure Factor = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 70 years \* 365 days/year) = 1.17 E-02  
 c Ingested Dose = Concentration\*Exposure Factor

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/OVERBURDEN  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Maximum Contaminant Level (MCL) (b) (mg/L)	Maximum Concentration (mg/L)	Exposure Factor (c)	Maximum Ingested Dose (d) (mg/kg/day)	Chronic Protective Body Dose (mg/kg/day)	Maximum Hazard Quotient
1,1,1-TRICHLOROETHANE		2.00E-01	6.60E-01	2.74E-02	1.81E-02		
1,1-DICHLOROETHANE	liver	--	1.80E+00	2.74E-02	4.93E-02	1.00E-01	5E-01
1,1-DICHLOROETHENE		7.00E-03	3.00E-02	2.74E-02	8.22E-04	9.00E-03	9E-02
1,2-DICHLOROETHENE (TOTAL)	liver/blood	7.00E-02	4.05E+00	2.74E-02	1.11E-01	9.00E-03	1E+01
ACETONE		--	1.80E-01	2.74E-02	4.93E-03	1.00E-01	5E-02
BENZENE		5.00E-03	2.50E-02	2.74E-02	6.85E-04		
CHLOROETHANE		--	7.00E-03	2.74E-02	1.92E-04	2.00E-02	1E-02
CHLOROETHANE		--	1.50E-01	2.74E-02	4.11E-03	4.00E-01	1E-02
ETHYLBENZENE		7.00E-01	2.00E-01	2.74E-02	5.48E-03	1.00E-01	5E-02
METHYLENE CHLORIDE		--	1.80E-01	2.74E-02	4.93E-03	6.00E-02	8E-02
TETRACHLOROETHENE	liver	5.00E-03	7.00E-02	2.74E-02	1.92E-03	1.00E-02	2E-01
TOLUENE	liver/kidney	1.00E+00	1.65E+00	2.74E-02	4.52E-02	2.00E-01	2E-01
TRICHLOROETHENE		5.00E-03	5.30E-02	2.74E-02	1.45E-03	6.00E-03	2E-01
VINYL CHLORIDE		2.00E-03	9.50E-02	2.74E-02	2.60E-03		
XYLENE (TOTAL)		1.00E+01	4.90E-02	2.74E-02	1.34E-03	2.00E+00	7E-04
1,2,4-TRIMETHYLBENZENE	liver/blood	--	2.00E-02	2.74E-02	5.48E-04	6.00E-04	9E-01
1,4-DICHLOROBENZENE		7.50E-02	2.00E-03	2.74E-02	5.48E-05	3.00E-01	2E-04
1,3,5-TRIMETHYLBENZENE	liver/blood	--	1.20E-02	2.74E-02	3.29E-04	4.00E-04	8E-01
2-METHYLPHENOL		--	6.25E-02	2.74E-02	1.71E-03	5.00E-02	3E-02
4-METHYLPHENOL	neurotoxicity	--	1.15E-01	2.74E-02	3.15E-03	5.00E-03	6E-01
BIS(2-ETHYLHEXYL)PHTHALATE		6.00E-03	3.00E-03	2.74E-02	8.22E-05	2.00E-02	4E-03
DI-N-BUTYLPHTHALATE		--	1.00E-03	2.74E-02	2.74E-05	1.00E-01	3E-04
4,4'-DDD		--	1.00E-05	2.74E-02	2.74E-07	3.00E-03	9E-05
4,4'-DDT		--	1.90E-05	2.74E-02	5.21E-07	5.00E-04	1E-03
ALDRIN		--	2.00E-06	2.74E-02	5.48E-08	3.00E-05	2E-03
AROCLOR 1221	reproductive tox.	5.00E-04	7.30E-03	2.74E-02	2.00E-04	7.00E-05	3E+00
DIELDRIN		--	1.00E-05	2.74E-02	2.74E-07	5.00E-05	5E-03
ENDRIN		2.00E-03	4.00E-06	2.74E-02	1.10E-07	3.00E-04	4E-04
HEPTACHLOR		4.00E-04	5.00E-06	2.74E-02	1.37E-07	5.00E-04	3E-04
ALUMINUM		--	1.02E+02	2.74E-02	2.79E+00		
ARSENIC	skin/vascular system	5.00E-02	1.71E-02	2.74E-02	4.68E-04	3.00E-04	2E+00
BARIUM	inc. blood pressure	2.00E+00	4.27E+00	2.74E-02	1.17E-01	7.00E-02	2E+00
BERYLLIUM		4.00E-03	5.40E-03	2.74E-02	1.48E-04	5.00E-03	3E-02
CHROMIUM	no obs. effects	1.00E-01	1.45E-01	2.74E-02	3.97E-03	5.00E-03	8E-01
COBALT		--	2.90E-01	2.74E-02	7.95E-03		
COPPER		1.30E+00	3.22E-01	2.74E-02	8.82E-03		
CYANIDE		2.00E-01	5.00E-03	2.74E-02	1.37E-04	2.00E-02	7E-03
IRON		--	2.86E+02	2.74E-02	7.84E+00		
LEAD		1.50E-02	1.20E-01	2.74E-02	3.29E-03		
MANGANESE	CNS	--	2.30E+01	2.74E-02	6.30E-01	5.00E-03	1E+02
MERCURY		2.00E-03	5.20E-04	2.74E-02	1.42E-05	3.00E-04	5E-02
NICKEL	dec. body weight	1.00E-01	2.47E-01	2.74E-02	6.77E-03	2.00E-02	3E-01
VANADIUM	no obs. effects	--	1.43E-01	2.74E-02	3.92E-03	7.00E-03	6E-01
ZINC		--	6.14E-01	2.74E-02	1.68E-02	3.00E-01	6E-02

HAZARD INDEX 2E+02

-- Not available

a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1E-01.

b U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories, December 1993.

c Exposure Factor = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 30 years \* 365 days/year) = 2.74E-02

d Ingested Dose = Concentration \* Exposure Factor

Hazard Indices (by health effect)

	Maximum Exposure
Liver/Blood effect	1E+01
CNS/Neurotoxic effect	1E+02
Skin/Vascular effect	2E+00
Reproductive Toxicity effect	3E+00
Increased Blood Pressure effect	2E+00
Other effects	2E+00

TABLE : 2a  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/OVERBURDEN (Average Plume Concentration)  
 EXPOSURE TYPE : INGESTION/FUTURE ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Maximum Contaminant Level (MCL) (b) (mg/L)	Average Concentration (mg/L)	Exposure Factor (c)	Average Ingested Dose (d) (mg/kg/day)	Chronic Protective Body Dose (mg/kg/day)	Average Hazard Quotient
1,1,1-TRICHLOROETHANE		2.00E-01	8.62E-02	2.74E-02	2.36E-04		
1,1-DICHLOROETHANE	liver	--	2.63E-01	2.74E-02	7.21E-03	1.00E-01	7E-02
1,1-DICHLOROETHENE		7.00E-03	7.98E-03	2.74E-02	2.19E-04	9.00E-03	2E-02
1,2-DICHLOROETHENE (TOTAL)	liver/blood	7.00E-02	3.89E-01	2.74E-02	1.07E-02	9.00E-03	1E+00
ACETONE		--	2.21E-02	2.74E-02	6.09E-04	1.00E-01	6E-03
BENZENE		5.00E-03	8.47E-03	2.74E-02	2.32E-04		
CHLOROETHANE		--	3.16E-02	2.74E-02	8.66E-04	4.00E-01	2E-03
ETHYLBENZENE		7.00E-01	1.17E-02	2.74E-02	3.21E-04	1.00E-01	3E-03
METHYLENE CHLORIDE		--	2.53E-02	2.74E-02	6.92E-04	6.00E-02	1E-02
TETRACHLOROETHENE	liver	5.00E-03	1.01E-02	2.74E-02	2.76E-04	1.00E-02	3E-02
TOLUENE	liver/kidney	1.00E+00	1.12E-01	2.74E-02	3.08E-03	2.00E-01	2E-02
TRICHLOROETHENE		5.00E-03	9.96E-03	2.74E-02	2.73E-04	6.00E-03	5E-02
VINYL CHLORIDE		2.00E-03	1.48E-02	2.74E-02	4.04E-04		
XYLENE (TOTAL)		1.00E+01	1.10E-02	2.74E-02	3.01E-04	2.00E+00	2E-04
1,2,4-TRIMETHYLBENZENE	liver/blood	--	4.03E-03	2.74E-02	1.10E-04	6.00E-04	2E-01
1,4-DICHLOROBENZENE		7.50E-02	2.25E-03	2.74E-02	6.17E-05	3.00E-01	2E-04
1,3,5-TRIMETHYLBENZENE	liver/blood	--	2.91E-03	2.74E-02	7.98E-05	4.00E-04	2E-01
2-METHYLPHENOL		--	9.48E-03	2.74E-02	2.60E-04	5.00E-02	5E-03
4-METHYLPHENOL	neurotoxicity	--	1.29E-02	2.74E-02	3.54E-04	5.00E-03	7E-02
BIS(2-ETHYLHEXYL)PHTHALATE		6.00E-03	4.86E-03	2.74E-02	1.33E-04	2.00E-02	7E-03
DI-N-BUTYLPHTHALATE		--	4.44E-03	2.74E-02	1.22E-04	1.00E-01	1E-03
4,4'-DDT		--	3.10E-05	2.74E-02	8.49E-07	5.00E-04	2E-03
ALDRIN		--	2.40E-05	2.74E-02	6.58E-07	3.00E-05	2E-02
AROCLOR 1221	reproductive tox.	5.00E-04	1.58E-03	2.74E-02	4.32E-05	7.00E-05	6E-01
DIELDRIN		--	4.10E-05	2.74E-02	1.12E-06	5.00E-05	2E-02
ENDRIN		2.00E-03	4.10E-05	2.74E-02	1.12E-06	3.00E-04	4E-03
HEPTACHLOR		4.00E-04	2.00E-05	2.74E-02	5.48E-07	5.00E-04	1E-03
ALUMINUM		--	9.11E+00	2.74E-02	2.49E-01		
ARSENIC	skin/vascular system	5.00E-02	7.67E-03	2.74E-02	2.10E-04	3.00E-04	7E-01
BARIUM	inc. blood pressure	2.00E+00	1.51E+00	2.74E-02	4.13E-02	7.00E-02	6E-01
BERYLLIUM		4.00E-03	9.59E-04	2.74E-02	2.63E-05	5.00E-03	5E-03
CHROMIUM	no obs. effects	1.00E-01	2.37E-02	2.74E-02	6.50E-04	5.00E-03	1E-01
COBALT		--	6.78E-02	2.74E-02	1.86E-03		
COPPER		1.30E+00	4.32E-02	2.74E-02	1.18E-03		
CYANIDE		2.00E-01	1.98E-03	2.74E-02	5.43E-05	2.00E-02	3E-03
IRON		--	4.17E+01	2.74E-02	1.14E+00		
LEAD		1.50E-02	2.09E-02	2.74E-02	5.73E-04		
MANGANESE	CNS	--	3.66E+00	2.74E-02	1.00E-01	5.00E-03	2E+01
MERCURY		2.00E-03	1.15E-04	2.74E-02	3.15E-06	3.00E-04	1E-02
NICKEL	dec. body weight	1.00E-01	4.93E-02	2.74E-02	1.35E-03	2.00E-02	7E-02
VANADIUM	no obs. effects	--	1.78E-02	2.74E-02	4.87E-04	7.00E-03	7E-02
ZINC		--	6.44E-02	2.74E-02	1.76E-03	3.00E-01	6E-03

HAZARD INDEX 2E+01

- Not available
- a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1 E-01.
- b U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories, December 1993.
- c Exposure Factor = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 30 years \* 365 days/year) = 2.74 E-02
- d Ingested Dose = Concentration\*Exposure Factor

Hazard Indices (by health effect)

Hazard Indices (by health effect)	Average Exposure
Liver/ Blood effect	2E+00
CNS/ Neurotoxic effect	2E+01
Skin/ Vascular effect	7E-01
Reproductive Toxicity effect	6E-01
Increased Blood Pressure effect	6E-01
Other effects	4E-01

TABLE 1

SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/BEDROCK  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Maximum Contaminant Level (MCL) (a) (mg/L)	Maximum Concentration (mg/L)	Exposure Factor (b)	Maximum Ingested Dose (c) (mg/kg/day)	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Maximum Increased CA Risk
1,1,1-TRICHLOROETHANE	D	2.00E-01	2.00E-03	1.17E-02	2.35E-05		
1,1-DICHLOROETHANE	C	--	8.00E-03	1.17E-02	9.39E-05		
1,2-DICHLOROETHENE (TOTAL)	D	7.00E-02	3.00E-03	1.17E-02	3.52E-05		
BENZENE	A	5.00E-03	5.00E-03	1.17E-02	5.87E-05	2.90E-02	2E-06
CHLOROETHANE	B2	--	1.00E-02	1.17E-02	1.17E-04	2.50E-03	3E-07
CHLOROFORM	B2	1.00E-01	2.00E-03	1.17E-02	2.35E-05	6.10E-03	1E-07
DICHLORODIFLUOROMETHANE	--	--	4.00E-02	1.17E-02	4.70E-04		
METHYLENE CHLORIDE	B2	--	3.00E-03	1.17E-02	3.52E-05	7.50E-03	3E-07
TETRACHLOROETHENE	B2-C	5.00E-03	4.00E-03	1.17E-02	4.70E-05	5.20E-02	2E-06
TOLUENE	D	1.00E+00	1.00E-05	1.17E-02	1.17E-05		
TRICHLOROETHENE	B2-C	5.00E-03	4.00E-03	1.17E-02	4.70E-05	1.10E-02	5E-07
VINYL CHLORIDE	A	2.00E-03	1.00E-03	1.17E-02	1.17E-05	1.90E+00	2E-05
1,4-DICHLOROBENZENE	C	7.50E-02	1.00E-03	1.17E-02	1.17E-05	2.40E-02	3E-07
BIS(2-ETHYLHEXYL)PHTHALATE	B2	6.00E-03	2.80E-02	1.17E-02	3.29E-04	1.40E-02	5E-06
DI-N-OCTYLPHTHALATE	--	--	2.10E-02	1.17E-02	2.47E-04		
DIETHYLPHTHALATE	D	--	4.00E-03	1.17E-02	4.70E-05		
PHENOL	D	--	1.70E-02	1.17E-02	2.00E-04		
DELTA-BHC	D	--	3.00E-06	1.17E-02	3.52E-08		
ENDOSULFAN I	--	--	4.00E-06	1.17E-02	4.70E-08		
ENDOSULFAN II	--	--	2.00E-06	1.17E-02	2.35E-08		
HEPTACHLOR EPOXIDE	B2	2.00E-04	2.00E-06	1.17E-02	2.35E-08	9.10E+00	2E-07
ALUMINUM	D	--	3.98E+00	1.17E-02	4.67E-02		
BARIUM	--	2.00E+00	2.92E-01	1.17E-02	3.43E-03		
BERYLLIUM	B2	4.00E-03	1.60E-03	1.17E-02	1.88E-05	4.30E+00	8E-05
CHROMIUM	A	1.00E-01	2.95E-02	1.17E-02	3.46E-04		
COBALT	--	--	7.30E-03	1.17E-02	8.57E-05		
COPPER	D	1.30E+00	1.52E-02	1.17E-02	1.78E-04		
CYANIDE	D	2.00E-01	1.10E-02	1.17E-02	1.29E-04		
IRON	D	--	2.13E+01	1.17E-02	2.50E-01		
LEAD	B2	1.50E-02	9.10E-03	1.17E-02	1.07E-04		
MANGANESE	D	--	1.46E+00	1.17E-02	1.71E-02		
MERCURY	D	2.00E-03	2.00E-04	1.17E-02	2.35E-06		
NICKEL	A	1.00E-01	2.58E-02	1.17E-02	3.03E-04		
THALLIUM	--	2.00E-03	4.00E-03	1.17E-02	4.70E-05		
VANADIUM	D	--	5.80E-03	1.17E-02	6.81E-05		
ZINC	D	--	9.34E-02	1.17E-02	1.10E-03		
<b>TOTAL RISK</b>							<b>1E-04</b>

-- Not available

a U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories, December 1993.

b Exposure Factor = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 70 years \* 365 days/year) = 1.17 E-02

c Ingested Dose = Concentration\*Exposure Factor

TABLE : 4  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/BEDROCK  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Maximum Contaminant Level (MCL) (b) (mg/L)	Maximum Concentration (mg/L)	Maximum Exposure Factor (c)	Maximum Ingested Dose (d) (mg/kg/day)	Chronic Protective Body Dose (mg/kg/day)	Maximum Hazard Quotient
1,1,1-TRICHLOROETHANE		2.00E-01	2.00E-03	2.74E-02	5.48E-05		
1,1-DICHLOROETHANE		--	8.00E-03	2.74E-02	2.19E-04	1.00E-01	2E-03
1,2-DICHLOROETHENE (TOTAL)		7.00E-02	3.00E-03	2.74E-02	8.22E-05	9.00E-03	9E-03
BENZENE		5.00E-03	5.00E-03	2.74E-02	1.37E-04		
CHLOROETHANE		--	1.00E-02	2.74E-02	2.74E-04	4.00E-01	7E-04
CHLOROFORM		1.00E-01	2.00E-03	2.74E-02	5.48E-05	1.00E-02	5E-03
DICHLORODIFLUOROMETHANE		--	4.00E-02	2.74E-02	1.10E-03	2.00E-01	5E-03
METHYLENE CHLORIDE		--	3.00E-03	2.74E-02	8.22E-05	6.00E-02	1E-03
TETRACHLOROETHENE		5.00E-03	4.00E-03	2.74E-02	1.10E-04	1.00E-02	1E-02
TOLUENE		1.00E+00	1.00E-03	2.74E-02	2.74E-05	2.00E-01	1E-04
TRICHLOROETHENE		5.00E-03	4.00E-03	2.74E-02	1.10E-04	6.00E-03	2E-02
VINYL CHLORIDE		2.00E-03	1.00E-03	2.74E-02	2.74E-05		
1,4-DICHLOROBENZENE		7.50E-02	1.00E-03	2.74E-02	2.74E-05	3.00E-01	9E-05
BIS(2-ETHYLHEXYL)PHTHALATE		6.00E-03	2.80E-02	2.74E-02	7.67E-04	2.00E-02	4E-02
DI-N-OCTYLPHTHALATE		--	2.10E-02	2.74E-02	5.75E-04	2.00E-02	3E-02
DIETHYLPHTHALATE		--	4.00E-03	2.74E-02	1.10E-04	8.00E-01	1E-04
PHENOL		--	1.70E-02	2.74E-02	4.66E-04	6.00E-01	8E-04
DELTA-BHC		--	3.00E-06	2.74E-02	8.22E-08		
ENDOSULFAN I		--	4.00E-06	2.74E-02	1.10E-07	5.00E-05	2E-03
ENDOSULFAN II		--	2.00E-06	2.74E-02	5.48E-08	5.00E-05	1E-03
HEPTACHLOR EPOXIDE		2.00E-04	2.00E-06	2.74E-02	5.48E-08	1.30E-05	4E-03
ALUMINUM		--	3.98E+00	2.74E-02	1.09E-01		
BARIUM	inc. blood press.	2.00E+00	2.92E-01	2.74E-02	8.00E-03	7.00E-02	1E-01
BERYLLIUM		4.00E-03	1.60E-03	2.74E-02	4.38E-05	5.00E-03	9E-03
CHROMIUM	no obs. effects	1.00E-01	2.95E-02	2.74E-02	8.08E-04	5.00E-03	2E-01
COBALT		--	7.30E-03	2.74E-02	2.00E-04		
COPPER		1.30E+00	1.52E-02	2.74E-02	4.16E-04		
CYANIDE		2.00E-01	1.10E-02	2.74E-02	3.01E-04	2.00E-02	2E-02
IRON		--	2.13E+01	2.74E-02	5.84E-01		
LEAD		1.50E-02	9.10E-03	2.74E-02	2.49E-04		
MANGANESE	CNS	--	1.46E+00	2.74E-02	4.00E-02	5.00E-03	8E+00
MERCURY		2.00E-03	2.00E-04	2.74E-02	5.48E-06	3.00E-04	2E-02
NICKEL		1.00E-01	2.58E-02	2.74E-02	7.07E-04	2.00E-02	4E-02
THALLIUM	liver/blood	2.00E-03	4.00E-03	2.74E-02	1.10E-04	7.00E-05	2E+00
VANADIUM		--	5.80E-03	2.74E-02	1.59E-04	7.00E-03	2E-02
ZINC		--	9.34E-02	2.74E-02	2.56E-03	3.00E-01	9E-03

HAZARD INDEX 1E+01

-- Not available

a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1 E-01.

b U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories. December 1993.

c Exposure Factor = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 30 years \* 365 days/year) = 2.74 E-02

d Ingested Dose = Concentration\*Exposure Factor

Hazard Indices (by health effect)

	Maximum Exposure
Liver/ Blood effect	2E+00
CNS effect	8E+00
Other effects	4E-01

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : SURFACE SOIL EXPOSED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION BY PRESENT/YOUTH TRESPASSER  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure	Average	Maximum	Oral Slope Factor	Average	Maximum
		Concentration (mg/kg)	Concentration (mg/kg)	Factor (a)	Ingested Dose (b) (mg/kg/day)	Ingested Dose (b) (mg/kg/day)		Increased CA Risk	Increased CA Risk
ACETONE	D	7.88E-03	2.70E-02	3.05E-08	2.41E-10	8.24E-10			
METHYLENE CHLORIDE	B2	5.62E-03	4.00E-03	3.05E-08	1.71E-10	1.22E-10	7.50E-03	1E-12	9E-13
TOLUENE	D	6.45E-03	9.00E-03	3.05E-08	1.97E-10	2.75E-10			
XYLENE (TOTAL)	D	7.05E-03	1.40E-02	3.05E-08	2.15E-10	4.27E-10			
2,4-DIMETHYLPHENOL	-	2.83E-01	4.20E-01	3.05E-08	8.64E-09	1.28E-08			
4-METHYLPHENOL	C	2.83E-01	4.20E-01	3.05E-08	8.64E-09	1.28E-08			
BENZOA(ANTHRA)CENE	B2	2.58E-01	4.40E-02	3.05E-08	7.87E-09	1.34E-09	7.93E+00	6E-08	1E-08
BENZOG(J)OPHYRENE	D	2.53E-01	6.60E-02	3.05E-08	7.72E-09	2.61E-09			
BIS(2-ETHYLHEXYL)PHTHALATE	B2	2.29E-01	1.10E+00	3.05E-08	6.98E-09	3.36E-08	1.47E+02	1E-10	5E-10
BUTYLBENZYLPHTHALATE	C	2.28E-01	5.40E-01	3.05E-08	6.96E-09	1.65E-08			
DI-N-BUTYLPHTHALATE	D	2.58E-01	4.90E-02	3.05E-08	7.88E-09	1.50E-09			
DIETHYLPHTHALATE	D	2.83E-01	4.20E-01	3.05E-08	8.64E-09	1.28E-08			
FLUORANTHENE	D	2.63E-01	1.20E-01	3.05E-08	8.13E-09	1.66E-09			
NAPHTHALENE	D	2.55E-01	9.60E-02	3.05E-08	7.78E-09	2.93E-09			
PHENANTHRENE	D	2.44E-01	7.50E-02	3.05E-08	7.46E-09	2.29E-09			
PYRENE	D	2.11E-01	5.00E-01	3.05E-08	6.49E-09	1.53E-08			
4,4'-DDD	B2	1.47E-03	2.60E-04	3.05E-08	4.48E-11	7.94E-12	2.40E-01	1E-11	2E-12
4,4'-DDE	B2	1.23E-03	3.90E-03	3.05E-08	3.77E-11	1.19E-10	3.40E-01	1E-11	4E-11
4,4'-DDT	B2	1.03E-03	6.80E-03	3.05E-08	3.14E-11	2.08E-10	3.40E-01	1E-11	7E-11
ALDRIN	B2	9.01E-04	1.90E-03	3.05E-08	2.75E-11	5.80E-11	1.70E+01	5E-10	1E-09
ALPHA-CHLORDANE	B2	9.55E-04	4.40E-04	3.05E-08	2.92E-11	1.34E-11	1.30E+00	4E-11	2E-11
AROCLOR 1016	B2	5.51E-01	6.40E+00	3.05E-08	1.68E-08	1.95E-07	7.70E+00	1E-07	2E-06
AROCLOR 1248	B2	7.07E-01	1.10E+01	3.05E-08	2.16E-08	3.36E-07	7.70E+00	2E-07	3E-06
DELTA-BHC	D	9.16E-04	2.70E-04	3.05E-08	2.80E-11	8.24E-12			
DIELDRIN	B2	1.57E-03	2.70E-03	3.05E-08	4.81E-11	8.24E-11	1.60E+01	8E-10	1E-09
ENDOSULFAN I	-	1.37E-03	8.90E-03	3.05E-08	4.19E-11	2.72E-10			
ENDOSULFAN II	-	1.36E-03	3.90E-03	3.05E-08	4.16E-11	1.19E-10			
ENDOSULFAN SULFATE	-	1.71E-03	2.40E-04	3.05E-08	5.22E-11	7.33E-12			
ENDRIN	D	1.34E-03	5.40E-04	3.05E-08	4.08E-11	1.65E-11			
ENDRIN ALDEHYDE	-	1.74E-03	6.20E-04	3.05E-08	5.30E-11	1.89E-11			
ENDRIN KETONE	-	2.93E-03	9.50E-03	3.05E-08	8.95E-11	2.90E-10			
GAMMA-CHLORDANE	B2	7.28E-04	2.40E-03	3.05E-08	2.22E-11	7.33E-11	1.30E+00	3E-11	1E-10
HEPTACHLOR	B2	9.90E-04	1.70E-05	3.05E-08	3.02E-11	5.19E-13	4.50E+00	1E-10	2E-12
HEPTACHLOR EPOXIDE	B2	1.18E-03	2.40E-03	3.05E-08	3.59E-11	7.33E-11	9.10E+00	3E-10	7E-10
METHOXYCHLOR	D	8.32E-03	1.40E-02	3.05E-08	2.54E-10	4.27E-10			
ALUMINIUM	D	3.80E+03	8.08E+03	3.05E-08	1.16E-04	2.47E-04			
ARSENIC	A	2.66E+00	4.50E+00	3.05E-08	8.11E-08	1.37E-07	1.75E+00	1E-07	2E-07
BARIUM	-	5.14E+01	1.88E+02	3.05E-08	1.57E-06	5.74E-06			
BERYLLIUM	B2	2.15E-01	7.40E-01	3.05E-08	6.57E-09	2.26E-08	4.30E+00	3E-08	1E-07
CADMIUM	B1	6.71E-01	1.40E+00	3.05E-08	2.05E-08	4.27E-08			
CHROMIUM	A	5.28E+00	9.70E+00	3.05E-08	1.61E-07	2.96E-07			
COBALT	-	1.14E+01	6.28E+01	3.05E-08	3.47E-07	1.92E-06			
COPPER	D	1.80E+01	5.34E+01	3.05E-08	5.49E-07	1.63E-06			
CYANIDE	D	1.48E-01	6.20E-01	3.05E-08	4.51E-09	1.89E-08			
LEAD	B2	1.88E+01	5.21E+01	3.05E-08	5.75E-07	1.59E-06			
MANGANESE	D	6.42E+02	2.38E+03	3.05E-08	1.96E-05	7.27E-05			
MERCURY	D	1.02E-01	3.90E-01	3.05E-08	3.10E-09	1.19E-08			
NICKEL	A	9.56E+00	2.08E+01	3.05E-08	2.92E-07	6.35E-07			
SELENIUM	D	3.25E-01	7.80E-01	3.05E-08	9.91E-09	2.38E-08			
SILVER	D	1.15E+00	7.40E+00	3.05E-08	3.51E-08	2.26E-07			
THALLIUM	-	4.90E-01	7.50E-01	3.05E-08	1.50E-08	2.29E-08			
VANADIUM	D	5.86E+00	1.09E+01	3.05E-08	1.79E-07	3.33E-07			
ZINC	D	7.87E+01	5.13E+02	3.05E-08	2.40E-06	1.57E-05			
TOTAL RISK								5E-07	4E-06

a Exposure Factor = (100 mg/day \* 39 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 70 years \* 365 days/year) = 3.05 E-08  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE 6  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : SURFACE SOIL/EXPOSED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION/PRESENT YOUTH TRESPASSER  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Ingested Dose (b) (mg/kg/day)	Maximum Ingested Dose (b) (mg/kg/day)	Chronic Protective Body Dose (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
ACETONE	7.88E-03	2.70E-02	2.14E-07	1.68E-09	5.77E-09	1.00E-01	2E-08	6E-08
METHYLENE CHLORIDE	5.62E-03	4.00E-03	2.14E-07	1.20E-09	8.55E-10	6.00E-02	2E-08	1E-08
TOLUENE	6.45E-03	9.00E-03	2.14E-07	1.38E-09	1.92E-09	2.00E-01	7E-09	1E-08
XYLENE (TOTAL)	7.05E-03	1.40E-02	2.14E-07	1.51E-09	2.99E-09	2.00E+00	8E-09	1E-09
2,4-DIMETHYLPHENOL	2.83E-01	4.20E-01	2.14E-07	6.05E-08	8.98E-08	2.00E-02	3E-06	4E-06
4-METHYLPHENOL	2.83E-01	4.20E-01	2.14E-07	6.05E-08	8.98E-08	5.00E-03	1E-05	2E-05
BENZO(A)ANTHRACENE	2.58E-01	4.40E-02	2.14E-07	5.51E-08	9.40E-09			
BENZO(G,HI)PERYLENE	2.53E-01	6.60E-02	2.14E-07	5.40E-08	1.41E-08	4.00E-02	1E-06	4E-07
BIS(2-ETHYLHEXYL)PHTHAL	2.29E-01	1.10E+00	2.14E-07	4.88E-08	2.35E-07	2.00E-02	2E-06	1E-05
BUTYLBENZYLPHthalATE	2.28E-01	5.40E-01	2.14E-07	4.87E-08	1.15E-07	2.00E-01	2E-07	6E-07
DI-N-BUTYLPHthalATE	2.58E-01	4.90E-02	2.14E-07	5.52E-08	1.05E-08	1.00E-01	6E-07	1E-07
DIETHYLPHthalATE	2.83E-01	4.20E-01	2.14E-07	6.05E-08	8.98E-08	8.00E-01	8E-08	1E-07
FLUORANTHENE	2.63E-01	1.20E-01	2.14E-07	5.62E-08	2.56E-08	4.00E-02	1E-06	6E-07
NAPHTHALENE	2.55E-01	9.60E-02	2.14E-07	5.44E-08	2.05E-08	4.00E-02	1E-06	5E-07
PHENANTHRENE	2.44E-01	7.50E-02	2.14E-07	5.22E-08	1.60E-08	4.00E-02	1E-06	4E-07
PYRENE	2.11E-01	5.00E-01	2.14E-07	4.50E-08	1.07E-07	3.00E-02	2E-06	4E-06
4,4'-DDD	1.47E-03	2.60E-04	2.14E-07	3.14E-10	5.56E-11	3.00E-03	1E-07	2E-08
4,4'-DDE	1.23E-03	3.90E-03	2.14E-07	2.64E-10	8.33E-10			
4,4'-DDT	1.03E-03	6.80E-03	2.14E-07	2.20E-10	1.45E-09	5.00E-04	4E-07	3E-06
ALDRIN	9.01E-04	1.90E-03	2.14E-07	1.93E-10	4.06E-10	3.00E-05	6E-06	1E-05
ALPHA-CHLORDANE	9.55E-04	4.40E-04	2.14E-07	2.04E-10	9.40E-11	6.00E-05	3E-06	2E-06
AROCLOR 1016	5.51E-01	6.40E+00	2.14E-07	1.18E-07	1.37E-06	7.00E-05	2E-03	2E-02
AROCLOR 1248	7.07E-01	1.10E+01	2.14E-07	1.51E-07	2.35E-06	7.00E-05	2E-03	3E-02
DELTA-BHC	9.16E-04	2.70E-04	2.14E-07	1.96E-10	5.77E-11			
DIELDRIN	1.57E-03	2.70E-03	2.14E-07	3.36E-10	5.77E-10	5.00E-05	7E-06	1E-05
ENDOSULFAN I	1.37E-03	8.90E-03	2.14E-07	2.93E-10	1.90E-09	5.00E-05	6E-06	4E-05
ENDOSULFAN II	1.36E-03	3.90E-03	2.14E-07	2.91E-10	8.33E-10	5.00E-05	6E-06	2E-05
ENDOSULFAN SULFATE	1.71E-03	2.40E-04	2.14E-07	3.65E-10	5.13E-11			
ENDRIN	1.34E-03	5.40E-04	2.14E-07	2.86E-10	1.15E-10	3.00E-04	1E-06	4E-07
ENDRIN ALDEHYDE	1.74E-03	6.20E-04	2.14E-07	3.71E-10	1.32E-10			
ENDRIN KETONE	2.93E-03	9.50E-03	2.14E-07	6.27E-10	2.03E-09			
GAMMA-CHLORDANE	7.28E-04	2.40E-03	2.14E-07	1.56E-10	5.13E-10	6.00E-05	3E-06	9E-06
HEPTACHLOR	9.90E-04	1.70E-05	2.14E-07	2.12E-10	3.63E-12	5.00E-04	4E-07	7E-09
HEPTACHLOR EPOXIDE	1.18E-03	2.40E-03	2.14E-07	2.52E-10	5.13E-10	1.30E-05	2E-05	4E-05
METHOXYCHLOR	8.32E-03	1.40E-02	2.14E-07	1.78E-09	2.99E-09	5.00E-03	4E-07	6E-07
ALUMINUM	3.80E+03	8.08E+03	2.14E-07	8.11E-04	1.73E-03			
ARSENIC	2.66E+00	4.50E+00	2.14E-07	5.68E-07	9.62E-07	3.00E-04	2E-03	3E-03
BARIUM	5.14E+01	1.88E+02	2.14E-07	1.10E-05	4.02E-05	7.00E-02	2E-04	6E-04
BERYLLIUM	2.15E-01	7.40E-01	2.14E-07	4.60E-08	1.58E-07	5.00E-03	9E-06	3E-05
CADMIUM	6.71E-01	1.40E+00	2.14E-07	1.43E-07	2.99E-07	1.00E-03	1E-04	3E-04
CHROMIUM	5.28E+00	9.70E+00	2.14E-07	1.13E-06	2.07E-06	5.00E-03	2E-04	4E-04
COBALT	1.14E+01	6.28E+01	2.14E-07	2.43E-06	1.34E-05			
COPPER	1.80E+01	5.34E+01	2.14E-07	3.84E-06	1.14E-05			
CYANIDE	1.48E-01	6.20E-01	2.14E-07	3.16E-08	1.32E-07	2.00E-02	2E-06	7E-06
LEAD	1.88E+01	5.21E+01	2.14E-07	4.03E-06	1.11E-05			
MANGANESE	6.42E+02	2.38E+03	2.14E-07	1.37E-04	5.09E-04	1.40E-01	1E-03	4E-03
MERCURY	1.02E-01	3.90E-01	2.14E-07	2.17E-08	8.33E-08	3.00E-04	7E-05	3E-04
NICKEL	9.56E+00	2.08E+01	2.14E-07	2.04E-06	4.44E-06	2.00E-02	1E-04	2E-04
SELENIUM	3.25E-01	7.80E-01	2.14E-07	6.94E-08	1.67E-07	5.00E-03	1E-05	3E-05
SILVER	1.15E+00	7.40E+00	2.14E-07	2.46E-07	1.58E-06	5.00E-03	5E-05	3E-04
THALLIUM	4.90E-01	7.50E-01	2.14E-07	1.05E-07	1.60E-07	7.00E-05	1E-03	2E-03
VANADIUM	5.86E+00	1.09E+01	2.14E-07	1.25E-06	2.33E-06	7.00E-03	2E-04	3E-04
ZINC	7.87E+01	5.13E+02	2.14E-07	1.68E-05	1.10E-04	3.00E-01	6E-05	4E-04

HAZARD INDEX 9E-03 7E-02

a Exposure Factor = (100 mg/day \* 39 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 2.14 E-07  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE 1  
 SITE : BENNINGTON LANDELL  
 ENV. MEDIUM : SURFACE SOIL / EXPOSED SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/RESENT/YOUTH TRESPASSER  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure Factor (a)	Average	Maximum	Adjusted Oral Slope Factor (c)	Average	Maximum
		Concentration (mg/kg)	Concentration (mg/kg)		Absorbed Dose (b) (mg/kg/day)	Absorbed Dose (b) (mg/kg/day)		Increased CA Risk	Increased CA Risk
AROCLOK-1016	B2	5.51E-01	6.40E+00	8.29E-08	4.57E-08	5.40E-07	7.70E+00	4E-07	4E-06
AROCLOK-1248	B2	7.07E-01	1.10E+01	8.29E-08	5.86E-08	6.12E-07	7.70E+00	5E-07	7E-06
TOTAL RISK								8E-07	1E-05

a. Exposure Factor =  $64525 \text{ cm}^2 \cdot 1.0 \cdot 0.06 \cdot 36 \text{ days/year} \cdot 10 \text{ years} \cdot 1E-6 \text{ kg/(mg)} / (50 \text{ kg} \cdot 70 \text{ years} \cdot 365 \text{ days/year}) = 8.29E-08$   
 b. Absorbed Dose = Concentration \* Exposure Factor  
 c. Divided by oral absorption factor of 1.0 for Aroclor 1016 and Aroclor 1248

TABLE 8  
 SITE: BENNINGTON LANDFILL  
 ENV. MEDIUM: SURFACE SOIL/EXPOSED SEDIMENTS  
 EXPOSURE TYPE: DERMAL CONTACT/PRESENT/YOUTH TRESPASSER  
 RISK TYPE: NONCARCINOGENIC

<i>Contaminant of Concern</i>	<i>Average Concentration (mg/kg)</i>	<i>Maximum Concentration (mg/kg)</i>	<i>Exposure Factor (a)</i>	<i>Average Absorbed Dose (b) (mg/kg/day)</i>	<i>Maximum Absorbed Dose (b) (mg/kg/day)</i>	<i>Adjusted Chronic Protective Body Dose (c) (mg/kg/day)</i>	<i>Average Hazard Quotient</i>	<i>Maximum Hazard Quotient</i>
AROCLORES-1016	5.51E-01	6.40E+00	5.80E-07	3.20E-07	3.71E-06	7.00E-05	5E-03	5E-02
AROCLORES-1248	7.07E-01	1.10E+01	5.80E-07	4.10E-07	6.38E-06	7.00E-05	6E-03	9E-02
CADMIUM	6.71E-01	1.40E+00	9.67E-08	6.49E-08	1.35E-07	5.00E-05	1E-03	3E-03
HAZARD INDEX							1E-02	1E-01

- a Exposure Factor/Aroclors = (4525 cm<sup>2</sup> \* 1.0 \* 0.09 \* 39 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 5.80E-07  
 Exposure Factor/Cadmium = (4525 cm<sup>2</sup> \* 1.0 \* 0.01 \* 39 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 9.67E-08
- b Absorbed Dose = Concentration \* Exposure Factor
- c Multiplied by oral absorption factors of 1.0 for aroclors and 0.1 for cadmium.

TABLE 1  
 SITE: BENNINGTON LANDFILL  
 ENVIRONMENT: SURFACE SOIL EXPOSED SEDIMENTS  
 EXPOSURE TYPE: INCIDENTAL INGESTION, FUTURE ADJACENT RESIDENTS  
 RISK TYPE: CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Concentration			Exposure Factor (a)	Average	Maximum	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
		Average (mg/kg)	Maximum (mg/kg)	Exposure		Ingested Dose (b) (mg/kg/day)	Ingested Dose (b) (mg/kg/day)			
CHILD										
ACETONE	D	7.88E-05	2.70E-02	4.70E-07	3.70E-09	1.27E-08				
METHYLENE CHLORIDE	B2	5.62E-03	4.00E-03	4.70E-07	2.64E-09	1.88E-09	7.50E-04	2E-11	1E-11	
TOLUENE	D	6.45E-03	9.00E-03	4.70E-07	3.03E-09	4.23E-09				
XYLENE (TOTAL)	D	7.05E-03	1.40E-02	4.70E-07	3.31E-09	6.58E-09				
2,4-DIMETHYLPHENOL	-	2.83E-01	4.20E-01	4.70E-07	1.33E-07	1.97E-07				
4-METHYLPHENOL	C	2.83E-01	4.20E-01	4.70E-07	1.33E-07	1.97E-07				
BENZO(A)ANTHRACENE	B2	2.58E-01	4.40E-02	4.70E-07	1.21E-07	2.07E-08	7.30E+00	9E-07	2E-07	
BENZO(G,H,I)PERYLENE	D	2.53E-01	6.60E-02	4.70E-07	1.19E-07	3.10E-08				
BIS(2-ETHYLHEXYL)PHTHALATE	B2	2.29E-01	1.10E+00	4.70E-07	1.07E-07	5.17E-07	1.40E-02	2E-09	7E-09	
BUTYL BENZYL PHTHALATE	C	2.28E-01	5.40E-01	4.70E-07	1.07E-07	2.54E-07				
DI-N-BUTYL PHTHALATE	D	2.58E-01	4.90E-02	4.70E-07	1.23E-07	2.30E-08				
DIETHYL PHTHALATE	D	2.83E-01	4.20E-01	4.70E-07	1.34E-07	1.97E-07				
FLUORANTHENE	D	2.63E-01	1.20E-01	4.70E-07	1.24E-07	5.64E-08				
NAPHTHALENE	D	2.55E-01	9.60E-02	4.70E-07	1.20E-07	4.51E-08				
PHENANTHRENE	D	2.44E-01	7.50E-02	4.70E-07	1.15E-07	3.52E-08				
PYRENE	D	2.11E-01	5.00E-01	4.70E-07	9.89E-08	2.35E-07				
4,4'-DDD	B2	1.47E-03	2.60E-04	4.70E-07	6.90E-10	1.22E-10	2.40E-01	2E-10	3E-11	
4,4'-DDE	B2	1.23E-03	3.90E-03	4.70E-07	5.80E-10	1.83E-09	3.40E-01	2E-10	6E-10	
4,4'-DDT	B2	1.03E-03	6.80E-03	4.70E-07	4.84E-10	3.19E-09	3.40E-01	2E-10	1E-09	
ALDRIN	B2	9.01E-04	1.90E-03	4.70E-07	4.23E-10	8.92E-10	1.70E+01	7E-09	2E-08	
ALPHA-CHLORDANE	B2	9.55E-04	4.40E-04	4.70E-07	4.49E-10	2.07E-10	1.30E+00	E-10	3E-10	
AROCLOR 1016	B2	5.51E-01	6.40E+00	4.70E-07	2.59E-07	3.01E-06	7.70E+00	2E-06	2E-05	
AROCLOR 1248	B2	7.07E-01	1.10E+01	4.70E-07	3.32E-07	5.17E-06	7.70E+00	3E-06	4E-05	
DELTA-BHC	D	9.16E-04	2.70E-04	4.70E-07	4.30E-10	1.27E-10				
DIELDRIN	B2	1.57E-03	2.70E-03	4.70E-07	7.39E-10	1.27E-09	1.60E+01	1E-08	2E-08	
ENDOSULFAN I	-	1.37E-03	8.90E-03	4.70E-07	6.45E-10	4.18E-09				
ENDOSULFAN II	-	1.36E-03	3.90E-03	4.70E-07	6.40E-10	1.83E-09				
ENDOSULFAN SULFATE	-	1.71E-03	2.40E-04	4.70E-07	8.03E-10	1.13E-10				
ENDRIN	D	1.34E-03	5.40E-04	4.70E-07	6.28E-10	2.54E-10				
ENDRIN ALDEHYDE	-	1.74E-03	6.20E-04	4.70E-07	8.16E-10	2.91E-10				
ENDRIN KETONE	-	2.93E-03	9.50E-03	4.70E-07	1.38E-09	4.46E-09				
GAMMA-CHLORDANE	B2	7.28E-04	2.40E-03	4.70E-07	3.42E-10	1.13E-09	1.30E+00	4E-10	1E-09	
HEPTACHLOR	B2	9.90E-04	1.70E-05	4.70E-07	4.65E-10	7.98E-12	4.50E+00	2E-09	4E-11	
HEPTACHLOR EPOXIDE	B2	1.18E-03	2.40E-03	4.70E-07	5.53E-10	1.13E-09	9.10E+00	5E-09	1E-08	
METHOXYCHLOR	D	8.32E-03	1.40E-02	4.70E-07	3.91E-09	6.58E-09				
ALUMINUM	D	3.80E+03	8.08E+03	4.70E-07	1.78E-03	3.79E-03				
ARSENIC	A	2.66E+00	4.50E+00	4.70E-07	1.25E-06	2.11E-06	1.75E+00	2E-06	4E-06	
BARIUM	-	5.14E+01	1.88E+02	4.70E-07	2.41E-05	8.83E-05				
BERYLLIUM	B2	2.15E-01	7.40E-01	4.70E-07	1.01E-07	3.48E-07	4.30E+00	4E-07	1E-06	
CADMIUM	B1	6.71E-01	1.40E+00	4.70E-07	3.15E-07	6.58E-07				
CHROMIUM	A	5.28E+00	9.70E+00	4.70E-07	2.48E-06	4.56E-06				
COBALT	-	1.14E+01	6.28E+01	4.70E-07	5.34E-06	2.95E-05				
COPPER	D	1.80E+01	5.34E+01	4.70E-07	8.44E-06	2.51E-05				
CYANIDE	D	1.48E-01	6.20E-01	4.70E-07	6.94E-08	2.91E-07				
LEAD	B2	1.88E+01	5.21E+01	4.70E-07	8.85E-06	2.45E-05				
MANGANESE	D	6.42E+02	2.38E+03	4.70E-07	3.02E-04	1.12E-03				
MERCURY	D	1.02E-01	3.90E-01	4.70E-07	4.77E-08	1.83E-07				
NICKEL	A	9.56E+00	2.08E+01	4.70E-07	4.49E-06	9.77E-06				
SELENIUM	D	3.25E-01	7.80E-01	4.70E-07	1.52E-07	3.66E-07				
SILVER	D	1.15E+00	7.40E+00	4.70E-07	5.40E-07	3.48E-06				
THALLIUM	-	4.90E-01	7.50E-01	4.70E-07	2.30E-07	3.52E-07				
VANADIUM	D	5.86E+00	1.09E+01	4.70E-07	2.75E-06	5.12E-06				
ZINC	D	7.87E+01	5.13E+02	4.70E-07	3.70E-05	2.41E-04				

(CONTINUED)

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : SURFACE SOIL / EXPOSED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION / FUTURE ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure	Average	Maximum	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average	Maximum
		Concentration (mg/kg)	Concentration (mg/kg)	Factor (a)	Ingested Dose (b) (mg/kg/day)	Ingested Dose (b) (mg/kg/day)		Increased CA Risk	Increased CA Risk
<b>ADULT</b>									
ACETONE	D	7.88E-03	2.70E-02	2.01E-07	1.59E-09	5.44E-09			
METHYLENE CHLORIDE	B2	5.62E-03	4.00E-03	2.01E-07	1.13E-09	8.05E-10	7.50E+00	8E-12	6E-12
TOLUENE	D	6.45E-03	9.00E-03	2.01E-07	1.30E-09	1.81E-09			
XYLENE (TOTAL)	D	7.05E-03	1.40E-02	2.01E-07	1.42E-09	2.82E-09			
2,4-DIMETHYLPHENOL	-	2.83E-01	4.20E-01	2.01E-07	5.70E-08	8.45E-08			
4-METHYLPHENOL	C	2.83E-01	4.20E-01	2.01E-07	5.70E-08	8.45E-08			
BENZO(A)ANTHRACENE	B2	2.58E-01	4.40E-02	2.01E-07	5.19E-08	8.86E-09	7.50E+00	4E-07	6E-08
BENZO(G,H,I)PERYLENE	D	2.53E-01	6.60E-02	2.01E-07	5.09E-08	1.33E-08			
BIS(2-ETHYLHEXYL)PHTHALATE	B2	2.29E-01	1.10E+00	2.01E-07	4.60E-08	2.21E-07	1.40E+02	6E-10	3E-09
BUTYLBENZYLPHthalATE	C	2.28E-01	5.40E-01	2.01E-07	4.59E-08	1.09E-07			
DI-N-BUTYLPHthalATE	D	2.58E-01	4.90E-02	2.01E-07	5.20E-08	9.86E-09			
DIETHYLPHthalATE	D	2.83E-01	4.20E-01	2.01E-07	5.70E-08	8.45E-08			
FLUOKANTHENE	D	2.63E-01	1.20E-01	2.01E-07	5.29E-08	2.42E-08			
NAPHTHALENE	D	2.55E-01	9.60E-02	2.01E-07	5.13E-08	1.93E-08			
PHENANTHRENE	D	2.44E-01	7.50E-02	2.01E-07	4.92E-08	1.51E-08			
PYRENE	D	2.11E-01	5.00E-01	2.01E-07	4.24E-08	1.01E-07			
4,4'-DDD	B2	1.47E-03	2.60E-04	2.01E-07	2.96E-10	5.23E-11	2.40E-01	7E-11	1E-11
4,4'-DDE	B2	1.23E-03	3.90E-03	2.01E-07	2.48E-10	7.85E-10	3.40E-01	8E-11	3E-10
4,4'-DDT	B2	1.03E-03	6.80E-03	2.01E-07	2.07E-10	1.37E-09	3.40E-01	7E-11	5E-10
ALDRIN	B2	9.01E-04	1.90E-03	2.01E-07	1.81E-10	3.82E-10	1.70E+01	3E-09	7E-09
ALPHA-CHLORDANE	B2	9.55E-04	4.40E-04	2.01E-07	1.92E-10	8.86E-11	1.30E+00	2E-10	1E-10
AROCLOR 1016	B2	5.51E-01	6.40E+00	2.01E-07	1.11E-07	1.29E-06	7.70E+00	9E-07	1E-05
AROCLOR 1248	B2	7.07E-01	1.10E+01	2.01E-07	1.42E-07	2.21E-06	7.70E+00	1E-06	2E-05
DELTA-BHC	D	9.16E-04	2.70E-04	2.01E-07	1.84E-10	5.43E-11			
DIELDRIN	B2	1.57E-03	2.70E-03	2.01E-07	3.17E-10	5.43E-10	1.60E+01	5E-09	9E-09
ENDOSULFAN I	-	1.37E-03	8.90E-03	2.01E-07	2.76E-10	1.79E-09			
ENDOSULFAN II	-	1.36E-03	3.90E-03	2.01E-07	2.74E-10	7.85E-10			
ENDOSULFAN SULFATE	-	1.71E-03	2.40E-04	2.01E-07	3.44E-10	4.83E-11			
ENDRIN	D	1.34E-03	5.40E-04	2.01E-07	2.69E-10	1.09E-10			
ENDRIN ALDEHYDE	-	1.74E-03	6.20E-04	2.01E-07	3.50E-10	1.25E-10			
ENDRIN KETONE	-	2.93E-03	9.50E-03	2.01E-07	5.90E-10	1.91E-09			
GAMMA-CHLORDANE	B2	7.28E-04	2.40E-03	2.01E-07	1.47E-10	4.83E-10	1.30E+00	2E-10	6E-10
HEPTACHLOR	B2	9.90E-04	1.70E-05	2.01E-07	1.99E-10	3.42E-12	4.50E+00	9E-10	2E-11
HEPTACHLOR EPOXIDE	B2	1.18E-03	2.40E-03	2.01E-07	2.37E-10	4.83E-10	9.10E+00	2E-09	4E-09
METHOXYCHLOR	D	8.32E-03	1.40E-02	2.01E-07	1.67E-09	2.82E-09			
ALUMINUM	D	3.80E+03	8.08E+03	2.01E-07	7.64E-04	1.63E-03			
ARSENIC	A	2.66E+00	4.50E+00	2.01E-07	5.35E-07	9.06E-07	1.75E+00	9E-07	2E-06
BARIUM	-	5.14E+01	1.88E+02	2.01E-07	1.03E-05	3.78E-05			
BERYLLIUM	B2	2.15E-01	7.40E-01	2.01E-07	4.33E-08	1.49E-07	4.30E+00	2E-07	6E-07
CADMIUM	B1	6.71E-01	1.40E+00	2.01E-07	1.35E-07	2.82E-07			
CHROMIUM	A	5.28E+00	9.70E+00	2.01E-07	1.06E-06	1.95E-06			
COBALT	-	1.14E+01	6.28E+01	2.01E-07	2.29E-06	1.26E-05			
COPPER	D	1.80E+01	5.34E+01	2.01E-07	3.62E-06	1.07E-05			
CYANIDE	D	1.48E-01	6.20E-01	2.01E-07	2.97E-08	1.25E-07			
LEAD	B2	1.88E+01	5.21E+01	2.01E-07	3.79E-06	1.05E-05			
MANGANESE	D	6.42E+02	2.38E+03	2.01E-07	1.29E-04	4.79E-04			
MERCURY	D	1.02E-01	3.90E-01	2.01E-07	2.05E-08	7.85E-08			
NICKEL	A	9.56E+00	2.08E+01	2.01E-07	1.92E-06	4.19E-06			
SELENIUM	D	3.25E-01	7.80E-01	2.01E-07	6.53E-08	1.57E-07			
SILVER	D	1.15E+00	7.40E+00	2.01E-07	2.32E-07	1.49E-06			
THALLIUM	-	4.90E-01	7.50E-01	2.01E-07	9.86E-08	1.51E-07			
VANADIUM	D	5.86E+00	1.09E+01	2.01E-07	1.18E-06	2.19E-06			
ZINC	D	7.87E+01	5.13E+02	2.01E-07	1.58E-05	1.03E-04			
<b>TOTAL RISK</b>								1E-05	1E-04

a Exposure Factor/Child = (200 mg/day \* 150 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 70 years \* 365 days/year) = 4.70 E-07  
 Exposure Factor/Adult = (100 mg/day \* 150 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 70 years \* 365 days/year) = 2.01 E-07  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE : 10  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : SURFACE SOIL/EXPOSED SEDIMENT  
 EXPOSURE TYPE : INCIDENTAL INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (b)	Average Ingested Dose (c) (mg/kg/day)	Maximum Ingested Dose (c) (mg/kg/day)	Oral Protective Body Dose (d) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
CHILD									
ACETONE		7.88E-03	2.70E-02	5.48E-06	4.32E-08	1.48E-07	1.00E-06	4E-08	1E-07
METHYLENE CHLORIDE		5.62E-03	4.00E-03	5.48E-06	3.08E-08	2.19E-08	6.00E-02	5E-07	4E-07
TOLUENE		6.45E-03	9.00E-03	5.48E-06	3.53E-08	4.93E-08	2.00E+00	2E-08	2E-08
XYLENE (TOTAL)		7.05E-03	1.40E-02	5.48E-06	3.86E-08	7.67E-08	2.00E+00	2E-08	4E-08
2,4-DIMETHYLPHENOL		2.83E-01	4.20E-01	5.48E-06	1.55E-06	2.30E-06	2.00E-01	8E-06	1E-05
4-METHYLPHENOL		2.83E-01	4.20E-01	5.48E-06	1.55E-06	2.30E-06	5.00E-02	3E-05	5E-05
BENZOXANTHRAcene		2.58E-01	4.40E-02	5.48E-06	1.41E-06	2.41E-07			
BENZOG(H,I)PERYLENE		2.53E-01	6.60E-02	5.48E-06	1.38E-06	3.62E-07	4.00E-02	3E-05	9E-06
BIS(2-ETHYLHEXYL)PHTHALATE		2.29E-01	1.10E+00	5.48E-06	1.25E-06	6.03E-06	2.00E-02	6E-05	3E-04
BUTYLBENZYLPHTHALATE		2.28E-01	5.40E-01	5.48E-06	1.25E-06	2.96E-06	2.00E+00	6E-07	1E-06
DI-N-BUTYLPHTHALATE		2.58E-01	4.90E-02	5.48E-06	1.42E-06	2.68E-07	1.00E+00	1E-06	3E-07
DIETHYLPHTHALATE		2.83E-01	4.20E-01	5.48E-06	1.55E-06	2.30E-06	8.00E+00	2E-07	3E-07
FLUORANTHRENE		2.63E-01	1.20E-01	5.48E-06	1.44E-06	6.58E-07	4.00E-01	4E-06	2E-06
NAPHTHALENE		2.55E-01	9.60E-02	5.48E-06	1.40E-06	5.26E-07	4.00E-02	3E-05	1E-05
PHENANTHRENE		2.44E-01	7.50E-02	5.48E-06	1.34E-06	4.11E-07	4.00E-02	3E-05	1E-05
PYRENE		2.11E-01	5.00E-01	5.48E-06	1.15E-06	2.74E-06	3.00E-01	4E-06	9E-06
4,4'-DDD		1.47E-03	2.60E-04	5.48E-06	8.05E-09	1.42E-09	3.0E-03	3E-06	5E-07
4,4'-DDE		1.23E-03	3.90E-03	5.48E-06	6.76E-09	2.14E-08			
4,4'-DDT		1.03E-03	6.80E-03	5.48E-06	5.64E-09	3.73E-08	5.00E-04	1E-05	7E-05
ALDRIN		9.01E-04	1.90E-03	5.48E-06	4.94E-09	1.04E-08	3.00E-05	2E-04	3E-04
ALPHA-CHLORDANE		9.55E-04	4.40E-04	5.48E-06	5.23E-09	2.41E-09	6.00E-05	9E-05	4E-05
AROCLOR 1016	reproductive tox. / neurotoxicity	5.51E-01	6.40E+00	5.48E-06	3.02E-06	3.51E-05	7.00E-05	4E-02	5E-01
AROCLOR 1248		7.07E-01	1.10E+01	5.48E-06	3.87E-06	6.03E-05	7.00E-05	6E-02	9E-01
DELTA-BHC		9.16E-04	2.70E-04	5.48E-06	5.02E-09	1.48E-09			
DIELDRIN		1.57E-03	2.70E-03	5.48E-06	8.62E-09	1.48E-08	5.00E-05	2E-04	3E-04
ENDOSULFAN I		1.37E-03	8.90E-03	5.48E-06	7.52E-09	4.88E-08	6.00E-03	1E-06	8E-06
ENDOSULFAN II		1.36E-03	3.90E-03	5.48E-06	7.46E-09	2.14E-08	6.00E-03	1E-06	4E-06
ENDOSULFAN SULFATE		1.71E-03	2.40E-04	5.48E-06	9.37E-09	1.32E-09			
ENDRIN		1.34E-03	5.40E-04	5.48E-06	7.33E-09	2.96E-09	3.00E-04	2E-05	1E-05
ENDRIN ALDEHYDE		1.74E-03	6.20E-04	5.48E-06	9.52E-09	3.40E-09			
ENDRIN KETONE		2.93E-03	9.50E-03	5.48E-06	1.61E-08	5.21E-08			
GAMMA-CHLORDANE		7.28E-04	2.40E-03	5.48E-06	3.99E-09	1.32E-08	6.00E-05	7E-05	2E-04
HEPTACHLOR		9.90E-04	1.70E-05	5.48E-06	5.42E-09	9.32E-11	5.00E-04	1E-05	2E-07
HEPTACHLOR EPOXIDE		1.18E-03	2.40E-03	5.48E-06	6.45E-09	1.32E-08	1.30E-05	5E-04	1E-03
METHOXYCHLOR		8.32E-03	1.40E-02	5.48E-06	4.56E-08	7.67E-08	5.00E-03	9E-06	2E-05
ALUMINUM		3.80E+03	8.08E+03	5.48E-06	2.08E-02	4.43E-02			
ARSENIC		2.66E+00	4.50E+00	5.48E-06	1.46E-05	2.47E-05	3.00E-04	5E-02	8E-02
BARIIUM		5.14E+01	1.88E+02	5.48E-06	2.82E-04	1.03E-03	7.00E-02	4E-03	1E-02
BERYLLIUM		2.15E-01	7.40E-01	5.48E-06	1.18E-06	4.05E-06	5.00E-03	2E-04	8E-04
ADMIIUM		6.71E-01	1.40E+00	5.48E-06	3.68E-06	7.67E-06	1.00E-03	4E-03	8E-03
CHROMIUM		5.28E+00	9.70E+00	5.48E-06	2.89E-05	5.32E-05	5.00E-03	6E-03	1E-02
COBALT		1.14E+01	6.28E+01	5.48E-06	6.23E-05	3.44E-04			
COPPER		1.80E+01	5.34E+01	5.48E-06	9.85E-05	2.93E-04			
CYANIDE		1.48E-01	6.20E-01	5.48E-06	8.09E-07	3.40E-06	2.00E-02	4E-05	2E-04
LEAD		1.88E+01	5.21E+01	5.48E-06	1.03E-04	2.85E-04			
MANGANESE		6.42E+02	2.38E+03	5.48E-06	3.52E-03	1.30E-02	1.40E-01	3E-02	9E-02
MERCURY		1.02E-01	3.90E-01	5.48E-06	5.57E-07	2.14E-06	3.00E-04	2E-03	7E-03
NICKEL		9.56E+00	2.08E+01	5.48E-06	5.24E-05	1.14E-04	2.00E-02	3E-03	6E-03
SELENIUM		3.25E-01	7.80E-01	5.48E-06	1.78E-06	4.27E-06	5.00E-03	4E-04	9E-04
SILVER		1.15E+00	7.40E+00	5.48E-06	6.30E-06	4.05E-05	5.00E-03	1E-03	8E-03
THALLIUM		4.90E-01	7.50E-01	5.48E-06	2.68E-06	4.11E-06	7.00E-04	4E-03	6E-03
VANADIUM		5.86E+00	1.09E+01	5.48E-06	3.21E-05	5.97E-05	7.00E-02	5E-03	9E-03
ZINC		7.87E+01	5.13E+02	5.48E-06	4.31E-04	2.81E-03	3.00E-01	1E-03	9E-03

HAZARD INDEX 2E-01 2E+00

- a Critical effect/target organ is listed only for contaminants with hazard quotients greater than 1 E-01.
- b Exposure Factor/Child = (200 mg/day \* 150 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 6 years \* 365 days/year) = 5.48 E-06  
 Exposure Factor/Adult = (100 mg/day \* 150 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 24 years \* 365 days/year) = 5.87 E-07
- c Ingested Dose = Concentration \* Exposure Factor
- d The subchronic protective body dose was used for children and the chronic value was used for adults.

Hazard Indices (by health effect) Maximum Exposure (Child)  
 Reproductive Toxicity / Neurotoxicity effect 1E+00  
 Other effects 1E+00

(CONTINUED)

TABLE 1 (CONTINUED)  
 SITE: BENNINGTON LANDFILL  
 ENV. MEDIUM: SURFACE SOIL/EXPOSED SEDIMENT  
 EXPOSURE TYPE: INCIDENTAL INGESTION/FUTURE ADJACENT RESIDENT  
 RISK TYPE: NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (b)	Average Ingested Dose (c) (mg/kg/day)	Maximum Ingested Dose (c) (mg/kg/day)	Oral Protective Body Dose (d) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
ADULT									
ACETONE		7.88E-03	2.70E-02	5.87E-07	4.63E-09	1.59E-08	1.00E-01	5E-08	2E-07
METHYLENE CHLORIDE		5.62E-03	4.00E-03	5.87E-07	3.30E-09	2.35E-09	6.00E-02	5E-08	4E-08
TOLUENE		6.45E-03	9.00E-03	5.87E-07	3.79E-06	5.28E-09	2.00E-01	2E-08	3E-08
XYLENE (TOTAL)		7.09E-03	1.40E-02	5.87E-07	4.14E-05	8.22E-09	2.00E-00	2E-09	4E-09
2,4-DIMETHYLPHENOL		2.83E-01	4.20E-01	5.87E-07	1.66E-07	2.47E-07	2.00E-02	8E-06	1E-05
4-METHYLPHENOL		2.83E-01	4.20E-01	5.87E-07	1.66E-07	2.47E-07	5.00E-03	3E-05	5E-05
BENZO(A)ANTHRACENE		2.58E-01	4.40E-02	5.87E-07	1.51E-07	2.58E-08			
BENZO(G,H,I)PERYLENE		2.53E-01	6.60E-02	5.87E-07	1.48E-07	3.87E-08	4.00E-02	4E-06	1E-06
BIS(2-ETHYLHEXYL)PHTHALATE		2.29E-01	1.10E+00	5.87E-07	1.34E-07	6.46E-07	2.00E-02	7E-06	2E-05
BUTYLBENZYLPHthalATE		2.28E-01	5.40E-01	5.87E-07	1.34E-07	3.17E-07	2.00E-01	7E-07	2E-06
DI-N-BUTYLPHthalATE		2.58E-01	4.90E-02	5.87E-07	1.52E-07	2.88E-08	1.00E-01	2E-06	3E-07
DIETHYLPHthalATE		2.83E-01	4.20E-01	5.87E-07	1.66E-07	2.47E-07	8.00E-01	2E-07	3E-07
FLUORANTHENE		2.63E-01	1.20E-01	5.87E-07	1.54E-07	7.05E-08	4.00E-02	4E-06	2E-06
NAPHTHALENE		2.55E-01	9.60E-02	5.87E-07	1.50E-07	5.64E-08	4.00E-02	4E-06	1E-06
PHENANTHRENE		2.44E-01	7.50E-02	5.87E-07	1.43E-07	4.40E-08	4.00E-02	4E-06	1E-06
PYRENE		2.11E-01	5.00E-01	5.87E-07	1.24E-07	2.94E-07	3.00E-02	4E-06	1E-05
4,4'-DDD		1.47E-03	2.60E-04	5.87E-07	8.62E-10	1.53E-10	3.00E-03	3E-07	5E-08
4,4'-DDE		1.23E-03	3.90E-03	5.87E-07	7.24E-10	2.29E-09			
4,4'-DDT		1.03E-03	6.80E-03	5.87E-07	6.05E-10	3.99E-09	5.00E-04	1E-06	8E-06
ALDRIN		9.01E-04	1.90E-03	5.87E-07	5.29E-10	1.12E-09	3.00E-05	2E-05	4E-05
ALPHA-CHLORDANE		9.55E-04	4.40E-04	5.87E-07	5.61E-10	2.58E-10	6.00E-05	9E-06	4E-06
AROCLOR 1016		5.51E-01	6.40E+00	5.87E-07	3.23E-07	3.76E-06	7.00E-05	5E-03	5E-02
AROCLOR 1248		7.07E-01	1.10E+01	5.87E-07	4.15E-07	6.46E-06	7.00E-05	6E-03	9E-02
DELTA-BHC		9.16E-04	2.70E-04	5.87E-07	5.38E-10	1.59E-10			
DIELDRIN		1.57E-03	2.70E-03	5.87E-07	9.24E-10	1.59E-09	5.00E-05	2E-05	3E-05
ENDOSULFAN I		1.37E-03	8.90E-03	5.87E-07	8.06E-10	5.23E-09	5.00E-05	2E-05	1E-04
ENDOSULFAN II		1.36E-03	3.90E-03	5.87E-07	8.00E-10	2.29E-09	5.00E-05	2E-05	5E-05
ENDOSULFAN SULFATE		1.71E-03	2.40E-04	5.87E-07	1.00E-09	1.41E-10			
ENDRIN		1.34E-03	5.40E-04	5.87E-07	7.86E-10	3.17E-10	3.00E-04	3E-06	1E-06
ENDRIN ALDEHYDE		1.74E-03	6.20E-04	5.87E-07	1.02E-09	3.64E-10			
ENDRIN KETONE		2.93E-03	9.50E-03	5.87E-07	1.72E-09	5.58E-09			
GAMMA-CHLORDANE		7.28E-04	2.40E-03	5.87E-07	4.27E-10	1.41E-09	6.00E-05	7E-06	2E-05
HEPTACHLOR		9.90E-04	1.70E-05	5.87E-07	5.81E-10	9.98E-12	5.00E-04	1E-06	2E-08
HEPTACHLOR EPOXIDE		1.18E-03	2.40E-03	5.87E-07	6.91E-10	1.41E-09	1.30E-05	5E-05	1E-04
METHOXYCHLOR		8.32E-03	1.40E-02	5.87E-07	4.88E-09	8.22E-09	5.00E-03	1E-06	2E-06
ALUMINUM		3.80E+03	8.08E+03	5.87E-07	2.23E-03	4.74E-03			
ARSENIC		2.66E+00	4.50E+00	5.87E-07	1.56E-06	2.64E-06	3.00E-04	5E-03	9E-03
BARIIUM		5.14E+01	1.88E+02	5.87E-07	3.02E-05	1.10E-04	7.00E-02	4E-04	2E-03
BERYLLIUM		2.15E-01	7.40E-01	5.87E-07	1.26E-07	4.34E-07	5.00E-03	3E-05	9E-05
CADMIUM		6.71E-01	1.40E+00	5.87E-07	3.94E-07	8.22E-07	1.00E-03	4E-04	8E-04
CHROMIUM		5.28E+00	9.70E+00	5.87E-07	3.10E-06	5.69E-06	5.00E-03	6E-04	1E-03
COBALT		1.14E+01	6.28E+01	5.87E-07	6.67E-06	3.69E-05			
COPPER		1.80E+01	5.34E+01	5.87E-07	1.06E-05	3.14E-05			
CYANIDE		1.48E-01	6.20E-01	5.87E-07	8.67E-08	3.64E-07	2.00E-02	4E-06	2E-05
LEAD		1.88E+01	5.21E+01	5.87E-07	1.11E-05	3.06E-05			
MANGANESE		6.42E+02	2.38E+03	5.87E-07	3.77E-04	1.40E-03	1.40E-01	3E-03	1E-02
MERCURY		1.02E-01	3.90E-01	5.87E-07	5.97E-08	2.29E-07	3.00E-04	2E-04	8E-04
NICKEL		9.56E+00	2.08E+01	5.87E-07	5.61E-06	1.22E-05	2.00E-02	3E-04	6E-04
SELENIUM		3.25E-01	7.80E-01	5.87E-07	1.91E-07	4.58E-07	5.00E-03	4E-05	9E-05
SILVER		1.15E+00	7.40E+00	5.87E-07	6.75E-07	4.34E-06	5.00E-03	1E-04	9E-04
THALLIUM		4.90E-01	7.50E-01	5.87E-07	2.88E-07	4.40E-07	7.00E-05	4E-03	6E-03
VANADIUM		5.86E+00	1.09E+01	5.87E-07	3.44E-06	6.40E-06	7.00E-03	5E-04	9E-04
ZINC		7.87E+01	5.13E+02	5.87E-07	4.62E-05	3.01E-04	3.00E-01	2E-04	1E-03

HAZARD INDEX	3E-02	2E-01
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a Critical effect/target organ is listed only for contaminants with hazard quotients greater than 1E-01.  
 b Exposure Factor/Child = (200 mg/day \* 150 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 6 years \* 365 days/year) = 5.48 E-06  
 Exposure Factor/Adult = (100 mg/day \* 150 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 24 years \* 365 days/year) = 5.87 E-07  
 c Ingested Dose = Concentration \* Exposure Factor  
 d The subchronic protective body dose was used for children and the chronic value was used for adults.

TABLE 11  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : SURFACE SOIL/EXPOSED SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average	Maximum	Adjusted Oral Slope Factor (c)	Average Increased CA Risk	Maximum Increased CA Risk
					Absorbed Dose (b) (mg/kg/day)	Absorbed Dose (b) (mg/kg/day)			
<b>CHILD</b>									
AROCLOK-1016	B2	5.51E-01	6.40E+00	3.09E-07	1.70E-07	1.87E-06	7.70E+00	1E-05	2E-05
AROCLOK-1248	B2	7.07E-01	1.10E+01	3.09E-07	2.18E-07	3.39E-06	7.70E+00	2E-06	3E-05
<b>ADULT</b>									
AROCLOK-1016	B2	5.51E-01	6.40E+00	7.00E-07	3.86E-07	4.48E-06	7.70E+00	3E-06	9E-05
AROCLOK-1248	B2	7.07E-01	1.10E+01	7.00E-07	4.85E-07	7.71E-06	7.70E+00	4E-06	6E-05
<b>TOTAL RISK</b>								1E-05	1E-04

- a Exposure Factor/Child =  $(2,190 \text{ cm}^2 \cdot 1.0 \cdot 0.06 \cdot 150 \text{ days/year} \cdot 6 \text{ years} \cdot 1\text{E-6 kg/mg}) / (15 \text{ kg} \cdot 70 \text{ years} \cdot 365 \text{ days/year}) = 3.09\text{E-07}$   
 Exposure Factor/Adult =  $(15,800 \text{ cm}^2 \cdot 1.0 \cdot 0.06 \cdot 150 \text{ days/year} \cdot 24 \text{ years} \cdot 1\text{E-6 kg/mg}) / (70 \text{ kg} \cdot 70 \text{ years} \cdot 365 \text{ days/year}) = 7.00\text{E-07}$   
 b Absorbed Dose = Concentration \* Exposure Factor  
 c Divided by oral absorption factor of 1.0 for Aroclor-1016 and Aroclor-1248.

TABLE 1  
 SITE: BUNNINGTON LANDFILL  
 ENV. MEDIUM: SURFACE SOIL/EXPOSED SEDIMENTS  
 EXPOSURE TYPE: DERMAL CONTACT/FUTURE/ADJACENT RESIDENT  
 RISK TYPE: NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Absorbed Dose (b) (mg/kg/day)	Maximum Absorbed Dose (b) (mg/kg/day)	Adjusted Protective Body Dose (c) (mg/kg/day)-1	Average Hazard Quotient	Maximum Hazard Quotient
<b>CHILD</b>								
AROCOLOR-1016	5.51E-01	6.40E+00	3.60E-06	1.98E-06	2.30E-05	7.00E-05	3E-02	3E-01
AROCOLOR-1248	7.07E-01	1.10E+01	3.60E-06	2.55E-06	3.96E-05	7.00E-05	4E-02	6E-01
CADMIUM	6.70E-01	1.40E+00	6.00E-07	4.02E-07	8.40E-07	5.00E-05	8E-03	2E-02
HAZARD INDEX							7E-02	9E-01
<b>ADULT</b>								
AROCOLOR-1016	5.51E-01	6.40E+00	2.04E-06	1.13E-06	1.31E-05	7.00E-05	2E-02	2E-01
AROCOLOR-1248	7.07E-01	1.10E+01	2.04E-06	1.44E-06	2.25E-05	7.00E-05	2E-02	3E-01
CADMIUM	6.70E-01	1.40E+00	3.41E-07	2.28E-07	4.77E-07	5.00E-05	5E-03	1E-02
HAZARD INDEX							4E-02	5E-01

- a Exposure Factor/Child =  $(2,190 \text{ cm}^2 * 1.0 * 0.01 * 150 \text{ days/year} * 6 \text{ years} * 1\text{E-}6 \text{ kg/mg}) / (15 \text{ kg} * 6 \text{ years} * 365 \text{ days/year}) = 6.00 \text{ E-}07$   
 Exposure Factor/Adult =  $(5,800 \text{ cm}^2 * 1.0 * 0.01 * 150 \text{ days/year} * 24 \text{ years} * 1\text{E-}6 \text{ kg/mg}) / (70 \text{ kg} * 24 \text{ years} * 365 \text{ days/year}) = 3.41 \text{ E-}07$
- b Absorbed Dose = Concentration \* Exposure Factor
- c Multiplied by oral absorption factors of 1.0 for aroclors and 0.1 for cadmium.  
 The subchronic protective body dose was used for children and the chronic value was used for adults.

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SUBMERGED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION, PRESENT/YOUTH TRESPASSER  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure Factor (a)	Average	Maximum	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average	Maximum
		Concentration (mg/kg)	Concentration (mg/kg)		Ingested Dose (b) (mg/kg/day)	Ingested Dose (b) (mg/kg/day)		Increased CA Risk	Increased CA Risk
2-BUTANONE	D	1.29E-01	5.30E-01	1.02E-08	1.31E-09	5.39E-09			
ACETONE	D	3.88E-01	2.00E+00	1.02E-08	3.95E-09	2.04E-08			
BIS(2-ETHYLHEXYL)PHTHALATE	B2	1.34E-01	2.60E-01	1.02E-08	1.36E-09	2.65E-09	1.40E+00	2E-11	4E-11
4,4'-DDD	B2	2.25E-03	2.60E-04	1.02E-08	2.29E-11	2.65E-12	2.40E+00	5E-12	6E-12
4,4'-DDE	B2	2.76E-03	3.20E-03	1.02E-08	2.80E-11	3.26E-11	3.40E+00	1E-11	1E-11
4,4'-DDT	B2	1.50E-03	3.80E-04	1.02E-08	1.53E-11	3.87E-12	3.40E+00	5E-12	1E-12
ALDRIN	B2	1.92E-03	6.30E-05	1.02E-08	1.95E-11	6.41E-13	1.70E+01	9E-10	1E-11
ALPHA-CHLORDANE	B2	2.72E-03	1.10E-02	1.02E-08	2.77E-11	1.12E-10	1.30E+00	4E-11	3E-10
BETA-BHC	C	1.69E-03	5.50E-04	1.02E-08	1.72E-11	5.60E-12	1.80E+00	9E-11	1E-11
DIELDRIN	B2	2.43E-03	6.70E-04	1.02E-08	2.47E-11	6.82E-12	1.60E+01	4E-10	1E-10
ENDOSULFAN I	--	1.91E-03	4.30E-05	1.02E-08	1.95E-11	4.38E-13			
ENDOSULFAN II	--	2.77E-03	7.30E-04	1.02E-08	2.82E-11	7.43E-12			
HEPTACHLOR	B2	1.92E-03	7.40E-05	1.02E-08	1.96E-11	7.53E-13	4.50E+00	9E-11	3E-12
HEPTACHLOR EPOXIDE	B2	1.32E-03	8.10E-04	1.02E-08	1.35E-11	8.24E-12	9.10E+00	1E-11	8E-11
ALUMINUM	I	2.43E+03	4.49E+03	1.02E-08	2.47E-05	4.57E-05			
ANTIMONY	--	3.41E+00	9.40E+00	1.02E-08	3.47E-08	9.57E-08			
ARSENIC	A	2.05E+01	6.42E+01	1.02E-08	2.08E-07	6.53E-07	1.75E+00	4E-07	1E-06
BARIUM	--	9.85E+02	4.17E+03	1.02E-08	1.00E-05	4.24E-05			
CHROMIUM	A	7.47E+00	1.72E+01	1.02E-08	7.61E-08	1.75E-07			
COBALT	--	3.64E+01	1.21E+02	1.02E-08	3.70E-07	1.23E-06			
COPPER	D	1.35E+01	2.61E+01	1.02E-08	1.37E-07	2.66E-07			
CYANIDE	D	2.75E-01	1.00E+00	1.02E-08	2.80E-09	1.02E-08			
LEAD	B2	1.38E+01	5.53E+01	1.02E-08	1.40E-07	5.63E-07			
MANGANESE	D	3.36E+03	1.33E+04	1.02E-08	3.42E-05	1.35E-04			
NICKEL	A	1.07E+01	2.19E+01	1.02E-08	1.09E-07	2.23E-07			
SELENIUM	D	1.31E+00	4.80E+00	1.02E-08	1.34E-08	4.88E-08			
SILVER	D	6.09E-01	1.60E+00	1.02E-08	6.19E-09	1.63E-08			
VANADIUM	D	7.02E+00	1.51E+01	1.02E-08	7.15E-08	1.54E-07			
ZINC	D	3.13E+01	8.74E+01	1.02E-08	3.19E-07	8.89E-07			
<b>TOTAL RISK</b>								<b>4E-07</b>	<b>1E-06</b>

a Exposure Factor = (100 mg/day \* 13 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 70 years \* 365 days/year) = 1.02 E-08  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE 14  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SUBMERGED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION/PRESENT/YOUTH TRESPASSER  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Ingested Dose (b) (mg/kg/day)	Maximum Ingested Dose (b) (mg/kg/day)	Chronic Oral Protective Body Dose (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
2-BUTANONE	1.29E-01	5.30E-01	7.12E-08	9.20E-09	3.78E-08	6.00E-01	2E-08	6E-08
ACETONE	3.88E-01	2.00E+00	7.12E-08	2.76E-08	1.42E-07	1.00E-01	3E-07	1E-06
BIS(2-ETHYLHEXYL)PHTHALATE	1.34E-01	2.60E-01	7.12E-08	9.52E-09	1.85E-08	2.00E-02	5E-07	9E-07
4,4'-DDD	2.25E-03	2.60E-04	7.12E-08	1.60E-10	1.85E-11	3.00E-03	5E-08	6E-09
4,4'-DDE	2.76E-03	3.20E-03	7.12E-08	1.96E-10	2.28E-10			
4,4'-DDT	1.50E-03	3.80E-04	7.12E-08	1.07E-10	2.71E-11	5.00E-04	2E-07	5E-08
ALDRIN	1.92E-03	6.30E-05	7.12E-08	1.37E-10	4.49E-12	3.00E-05	5E-06	1E-07
ALPHA-CHLORDANE	2.72E-03	1.10E-02	7.12E-08	1.94E-10	7.84E-10	6.00E-05	3E-06	1E-05
BETA-BHC	1.69E-03	5.50E-04	7.12E-08	1.20E-10	3.92E-11			
DIELDRIN	2.43E-03	6.70E-04	7.12E-08	1.73E-10	4.77E-11	5.00E-05	3E-06	1E-06
ENDOSULFAN I	1.91E-03	4.30E-05	7.12E-08	1.36E-10	3.06E-12	5.00E-05	3E-06	6E-08
ENDOSULFAN II	2.77E-03	7.30E-04	7.12E-08	1.97E-10	5.20E-11	5.00E-05	4E-06	1E-06
HEPTACHLOR	1.92E-03	7.40E-05	7.12E-08	1.37E-10	5.27E-12	5.00E-04	3E-07	1E-08
HEPTACHLOR EPOXIDE	1.33E-03	8.10E-04	7.12E-08	9.44E-11	5.77E-11	1.30E-05	7E-06	4E-06
ALUMINUM	2.43E+03	4.49E+03	7.12E-08	1.73E-04	3.20E-04			
ANTIMONY	3.41E+00	9.40E+00	7.12E-08	2.43E-07	6.70E-07	4.00E-04	6E-04	2E-03
ARSENIC	2.05E+01	6.42E+01	7.12E-08	1.46E-06	4.57E-06	3.00E-04	5E-03	2E-02
BARIUM	9.85E+02	4.17E+03	7.12E-08	7.01E-05	2.97E-04	7.00E-02	1E-03	4E-03
CHROMIUM	7.48E+00	1.72E+01	7.12E-08	5.32E-07	1.23E-06	5.00E-03	1E-04	2E-04
COBALT	3.64E+01	1.21E+02	7.12E-08	2.59E-06	8.62E-06			
COPPER	1.35E+01	2.61E+01	7.12E-08	9.62E-07	1.86E-06			
CYANIDE	2.75E-01	1.00E+00	7.12E-08	1.96E-08	7.12E-08	2.00E-02	1E-06	4E-06
LEAD	1.38E+01	5.53E+01	7.12E-08	9.79E-07	3.94E-06			
MANGANESE	3.36E+03	1.33E+04	7.12E-08	2.39E-04	9.47E-04	1.40E-01	2E-03	7E-03
NICKEL	1.07E+01	2.19E+01	7.12E-08	7.60E-07	1.56E-06	2.00E-02	4E-05	8E-05
SELENIUM	1.32E+00	4.80E+00	7.12E-08	9.37E-08	3.42E-07	5.00E-03	2E-05	7E-05
SILVER	6.09E-01	1.60E+00	7.12E-08	4.34E-08	1.14E-07	5.00E-03	9E-06	2E-05
VANADIUM	7.03E+00	1.51E+01	7.12E-08	5.00E-07	1.08E-06	7.00E-03	7E-05	2E-04
ZINC	3.14E+01	8.74E+01	7.12E-08	2.23E-06	6.23E-06	3.00E-01	7E-06	2E-05
HAZARD INDEX							8E-03	3E-02

- a Exposure Factor = (100 mg/day \* 13 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 7.12 E-08
- b Ingested Dose = Concentration \* Exposure Factor

TABLE 1 : 15  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SUBMERGED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION OF TURTLE ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average	Maximum	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
					Ingested Dose (b) (mg/kg/day)	Ingested Dose (b) (mg/kg/day)			
<b>CHILD</b>									
2-BUTANONE	D	1.29E-01	5.30E-01	8.14E-08	1.05E-08	4.31E-08			
ACETONE	D	3.88E-01	2.00E+00	8.14E-08	3.16E-08	1.63E-07			
BIS(2-ETHYLHEXYL)PHTHALATE	B2	1.34E-01	2.60E-01	8.14E-08	1.05E-08	2.12E-08	1.40E-02	2E-11	5E-10
4,4'-DDD	B2	2.25E-03	2.60E-04	8.14E-08	1.83E-10	2.12E-11	2.40E-01	4E-11	5E-12
4,4'-DDE	B2	2.76E-03	3.20E-03	8.14E-08	2.24E-10	2.61E-10	3.40E-01	8E-11	9E-11
4,4'-DDT	B2	1.50E-03	3.80E-04	8.14E-08	1.22E-10	3.09E-11	3.40E-01	4E-11	1E-11
ALDRIN	B2	1.92E-03	6.30E-05	8.14E-08	1.56E-10	5.13E-12	1.70E+01	3E-09	9E-11
ALPHA-CHLORDANE	B2	2.72E-03	1.10E-02	8.14E-08	2.21E-10	8.95E-10	1.50E+00	3E-11	1E-09
BETA-BHC	C	1.69E-03	5.50E-04	8.14E-08	1.38E-10	4.48E-11	1.80E+00	2E-11	8E-11
DIELDRIN	B2	2.43E-03	6.70E-04	8.14E-08	1.97E-10	5.45E-11	1.60E+01	3E-09	9E-10
ENDOSULFAN I	--	1.91E-03	4.30E-05	8.14E-08	1.56E-10	3.50E-12			
ENDOSULFAN II	--	2.77E-03	7.30E-04	8.14E-08	2.24E-10	5.94E-11			
HEPTACHLOR	B2	1.92E-03	7.40E-05	8.14E-08	1.56E-10	6.02E-12	4.50E+00	7E-11	5E-11
HEPTACHLOR EPOXIDE	B2	1.32E-03	8.10E-04	8.14E-08	1.38E-10	6.59E-11	9.10E+00	1E-09	6E-10
ALUMINUM	D	2.43E+03	4.49E+03	8.14E-08	1.88E-04	3.66E-04			
ANTIMONY	--	3.41E+00	9.40E+00	8.14E-08	2.77E-07	7.65E-07			
ARSENIC	A	2.05E+01	6.42E+01	8.14E-08	1.67E-06	5.23E-06	1.75E+00	3E-06	9E-06
BARIUM	--	9.85E+02	4.17E+03	8.14E-08	8.02E-05	3.39E-04			
CHROMIUM	A	7.47E+00	1.72E+01	8.14E-08	6.09E-07	1.40E-06			
COBALT	--	3.64E+01	1.21E+02	8.14E-08	2.96E-06	9.85E-06			
COPPER	D	1.35E+01	2.61E+01	8.14E-08	1.10E-06	2.12E-06			
CYANIDE	D	2.75E-01	1.00E+00	8.14E-08	2.24E-08	8.14E-08			
LEAD	B2	1.38E+01	5.53E+01	8.14E-08	1.12E-06	4.50E-06			
MANGANESE	D	3.36E+03	1.33E+04	8.14E-08	2.73E-04	1.08E-03			
NICKEL	A	1.07E+01	2.19E+01	8.14E-08	8.69E-07	1.78E-06			
SELENIUM	D	1.31E+00	4.80E+00	8.14E-08	1.07E-07	3.91E-07			
SILVER	D	6.09E-01	1.60E+00	8.14E-08	4.96E-08	1.30E-07			
VANADIUM	D	7.02E+00	1.51E+01	8.14E-08	5.72E-07	1.23E-06			
ZINC	D	3.13E+01	8.74E+01	8.14E-08	2.55E-06	7.12E-06			
<b>ADULT</b>									
2-BUTANONE	D	1.29E-01	5.30E-01	1.74E-08	2.25E-09	9.25E-09			
ACETONE	D	3.88E-01	2.00E+00	1.74E-08	6.77E-09	3.49E-08			
BIS(2-ETHYLHEXYL)PHTHALATE	B2	1.34E-01	2.60E-01	1.74E-08	2.33E-09	4.54E-09	1.40E-02	3E-11	6E-11
4,4'-DDD	B2	2.25E-03	2.60E-04	1.74E-08	3.92E-11	4.54E-12	2.40E-01	9E-12	1E-12
4,4'-DDE	B2	2.76E-03	3.20E-03	1.74E-08	4.81E-11	5.58E-11	3.40E-01	2E-11	2E-11
4,4'-DDT	B2	1.50E-03	3.80E-04	1.74E-08	2.62E-11	6.63E-12	3.40E-01	9E-12	2E-12
ALDRIN	B2	1.92E-03	6.30E-05	1.74E-08	3.35E-11	1.10E-12	1.70E+01	6E-10	2E-11
ALPHA-CHLORDANE	B2	2.72E-03	1.10E-02	1.74E-08	4.74E-11	1.92E-10	1.30E+00	6E-11	2E-10
BETA-BHC	C	1.69E-03	5.50E-04	1.74E-08	2.95E-11	9.59E-12	1.80E+00	5E-11	2E-11
DIELDRIN	B2	2.43E-03	6.70E-04	1.74E-08	4.23E-11	1.17E-11	1.60E+01	7E-10	2E-10
ENDOSULFAN I	--	1.91E-03	4.30E-05	1.74E-08	3.34E-11	7.50E-13			
ENDOSULFAN II	--	2.77E-03	7.30E-04	1.74E-08	4.84E-11	1.27E-11			
HEPTACHLOR	B2	1.92E-03	7.40E-05	1.74E-08	3.35E-11	1.29E-12	4.50E+00	2E-10	6E-12
HEPTACHLOR EPOXIDE	B2	1.32E-03	8.10E-04	1.74E-08	2.31E-11	1.41E-11	9.10E+00	2E-10	1E-10
ALUMINUM	D	2.43E+03	4.49E+03	1.74E-08	4.24E-05	7.83E-05			
ANTIMONY	--	3.41E+00	9.40E+00	1.74E-08	5.94E-08	1.64E-07			
ARSENIC	A	2.05E+01	6.42E+01	1.74E-08	3.57E-07	1.12E-06	1.75E+00	6E-07	2E-06
BARIUM	--	9.85E+02	4.17E+03	1.74E-08	1.72E-05	7.27E-05			
CHROMIUM	A	7.47E+00	1.72E+01	1.74E-08	1.30E-07	3.00E-07			
COBALT	--	3.64E+01	1.21E+02	1.74E-08	6.35E-07	2.11E-06			
COPPER	D	1.35E+01	2.61E+01	1.74E-08	2.36E-07	4.55E-07			
CYANIDE	D	2.75E-01	1.00E+00	1.74E-08	4.80E-09	1.74E-08			
LEAD	B2	1.38E+01	5.53E+01	1.74E-08	2.40E-07	9.65E-07			
MANGANESE	D	3.36E+03	1.33E+04	1.74E-08	5.86E-05	2.32E-04			
NICKEL	A	1.07E+01	2.19E+01	1.74E-08	1.86E-07	3.82E-07			
SELENIUM	D	1.31E+00	4.80E+00	1.74E-08	2.29E-08	8.37E-08			
SILVER	D	6.09E-01	1.60E+00	1.74E-08	1.06E-08	2.79E-08			
VANADIUM	D	7.02E+00	1.51E+01	1.74E-08	1.23E-07	2.63E-07			
ZINC	D	3.13E+01	8.74E+01	1.74E-08	5.47E-07	1.52E-06			
<b>TOTAL RISK</b>								<b>4E-06</b>	<b>1E-05</b>

a Exposure Factor/Child = (200 mg/day \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 70 years \* 365 days/year) = 8.14 E-08  
 Exposure Factor/Adult = (100 mg/day \* 13 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 70 years \* 365 days/year) = 1.74 E-08  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE 10  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SUBMERGED SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION/FUTURE ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Ingested Dose (b) (mg/kg/day)	Maximum Ingested Dose (b) (mg/kg/day)	Oral Protective Body Dose (c) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
<b>CHILD</b>								
2-BUTANONE	1.29E-01	5.30E-01	9.50E-07	1.23E-07	5.03E-07	2.00E-01	6E-07	3E-06
ACETONE	3.88E-01	2.00E+00	9.50E-07	3.68E-07	1.90E-06	1.00E+00	4E-07	2E-06
BIS(2-ETHYLHEXYL)PHTHAL	1.34E-01	2.60E-01	9.50E-07	1.27E-07	2.47E-07	2.00E-02	6E-06	1E-05
4,4'-DDD	2.25E-03	2.60E-04	9.50E-07	2.14E-09	2.47E-10	3.00E-03	7E-07	8E-08
4,4'-DDE	2.76E-03	3.20E-03	9.50E-07	2.62E-09	3.04E-09			
4,4'-DDT	1.50E-03	3.80E-04	9.50E-07	1.43E-09	3.61E-10	5.00E-04	3E-06	7E-07
ALDRIN	1.92E-03	6.30E-05	9.50E-07	1.82E-09	5.98E-11	3.00E-05	6E-05	2E-06
ALPHA-CHLORDANE	2.72E-03	1.10E-02	9.50E-07	2.58E-09	1.04E-08	6.00E-05	4E-05	2E-04
BETA-BHC	1.69E-03	5.50E-04	9.50E-07	1.61E-09	5.22E-10			
DIELDRIN	2.43E-03	6.70E-04	9.50E-07	2.30E-09	6.36E-10	5.00E-05	5E-05	1E-05
ENDOSULFAN I	1.91E-03	4.30E-05	9.50E-07	1.82E-09	4.08E-11	6.00E-03	3E-07	7E-09
ENDOSULFAN II	2.77E-03	7.30E-04	9.50E-07	2.63E-09	6.93E-10	6.00E-03	4E-07	1E-07
HEPTACHLOR	1.92E-03	7.40E-05	9.50E-07	1.83E-09	7.03E-11	5.00E-04	4E-06	1E-07
HEPTACHLOR EPOXIDE	1.33E-03	8.10E-04	9.50E-07	1.26E-09	7.69E-10	1.30E-05	1E-04	6E-05
ALUMINUM	2.43E+03	4.49E+03	9.50E-07	2.31E-03	4.26E-03			
ANTIMONY	3.41E+00	9.40E+00	9.50E-07	3.24E-06	8.93E-06	4.00E-04	8E-03	2E-02
ARSENIC	2.05E+01	6.42E+01	9.50E-07	1.94E-05	6.10E-05	3.00E-04	6E-02	2E-01
BARIUM	9.85E+02	4.17E+03	9.50E-07	9.35E-04	3.96E-03	7.00E-02	1E-02	6E-02
CHROMIUM	7.48E+00	1.72E+01	9.50E-07	7.10E-06	1.63E-05	2.00E-02	4E-04	8E-04
COBALT	3.64E+01	1.21E+02	9.50E-07	3.46E-05	1.15E-04			
COPPER	1.35E+01	2.61E+01	9.50E-07	1.28E-05	2.48E-05			
CYANIDE	2.75E-01	1.00E+00	9.50E-07	2.61E-07	9.50E-07	2.00E-02	1E-05	5E-05
LEAD	1.38E+01	5.53E+01	9.50E-07	1.31E-05	5.25E-05			
MANGANESE	3.36E+03	1.33E+04	9.50E-07	3.19E-03	1.26E-02	1.40E-01	2E-02	9E-02
NICKEL	1.07E+01	2.19E+01	9.50E-07	1.01E-05	2.08E-05	2.00E-02	5E-04	1E-03
SELENIUM	1.32E+00	4.80E+00	9.50E-07	1.25E-06	4.56E-06	5.00E-03	2E-04	9E-04
SILVER	6.09E-01	1.60E+00	9.50E-07	5.78E-07	1.52E-06	5.00E-03	1E-04	3E-04
VANADIUM	7.03E+00	1.51E+01	9.50E-07	6.67E-06	1.43E-05	7.00E-03	1E-03	2E-03
ZINC	3.14E+01	8.74E+01	9.50E-07	2.98E-05	8.30E-05	3.00E-01	1E-04	3E-04
<b>HAZARD INDEX</b>							1E-01	4E-01
<b>ADULT</b>								
2-BUTANONE	1.29E-01	5.30E-01	5.09E-08	6.57E-09	2.70E-08	6.00E-01	1E-08	4E-08
ACETONE	3.88E-01	2.00E+00	5.09E-08	1.97E-08	1.02E-07	1.00E-01	2E-07	1E-06
BIS(2-ETHYLHEXYL)PHTHAL	1.34E-01	2.60E-01	5.09E-08	6.80E-09	1.32E-08	2.00E-02	3E-07	7E-07
4,4'-DDD	2.25E-03	2.60E-04	5.09E-08	1.14E-10	1.32E-11	3.00E-03	4E-08	4E-09
4,4'-DDE	2.76E-03	3.20E-03	5.09E-08	1.40E-10	1.63E-10			
4,4'-DDT	1.50E-03	3.80E-04	5.09E-08	7.64E-11	1.93E-11	5.00E-04	2E-07	4E-08
ALDRIN	1.92E-03	6.30E-05	5.09E-08	9.77E-11	3.21E-12	3.00E-05	3E-06	1E-07
ALPHA-CHLORDANE	2.72E-03	1.10E-02	5.09E-08	1.38E-10	5.60E-10	6.00E-05	2E-06	9E-06
BETA-BHC	1.69E-03	5.50E-04	5.09E-08	8.60E-11	2.80E-11			
DIELDRIN	2.43E-03	6.70E-04	5.09E-08	1.23E-10	3.41E-11	5.00E-05	2E-06	7E-07
ENDOSULFAN I	1.91E-03	4.30E-05	5.09E-08	9.73E-11	2.19E-12	5.00E-05	2E-06	4E-08
ENDOSULFAN II	2.77E-03	7.30E-04	5.09E-08	1.41E-10	3.71E-11	5.00E-05	3E-06	7E-07
HEPTACHLOR	1.92E-03	7.40E-05	5.09E-08	9.78E-11	3.77E-12	5.00E-04	2E-07	8E-09
HEPTACHLOR EPOXIDE	1.33E-03	8.10E-04	5.09E-08	6.74E-11	4.12E-11	1.30E-05	5E-06	3E-06
ALUMINUM	2.43E+03	4.49E+03	5.09E-08	1.24E-04	2.28E-04			
ANTIMONY	3.41E+00	9.40E+00	5.09E-08	1.73E-07	4.78E-07	4.00E-04	4E-04	1E-03
ARSENIC	2.05E+01	6.42E+01	5.09E-08	1.04E-06	3.27E-06	3.00E-04	3E-03	1E-02
BARIUM	9.85E+02	4.17E+03	5.09E-08	5.01E-05	2.12E-04	7.00E-02	7E-04	3E-03
CHROMIUM	7.48E+00	1.72E+01	5.09E-08	3.80E-07	8.75E-07	5.00E-03	8E-05	2E-04
COBALT	3.64E+01	1.21E+02	5.09E-08	1.85E-06	6.16E-06			
COPPER	1.35E+01	2.61E+01	5.09E-08	6.87E-07	1.33E-06			
CYANIDE	2.75E-01	1.00E+00	5.09E-08	1.40E-08	5.09E-08	2.00E-02	7E-07	3E-06
LEAD	1.38E+01	5.53E+01	5.09E-08	7.00E-07	2.81E-06			
MANGANESE	3.36E+03	1.33E+04	5.09E-08	1.71E-04	6.77E-04	1.40E-01	1E-03	5E-03
NICKEL	1.07E+01	2.19E+01	5.09E-08	5.43E-07	1.11E-06	2.00E-02	3E-05	6E-05
SELENIUM	1.32E+00	4.80E+00	5.09E-08	6.69E-08	2.44E-07	5.00E-03	1E-05	5E-05
SILVER	6.09E-01	1.60E+00	5.09E-08	3.10E-08	8.14E-08	5.00E-03	6E-06	2E-05
VANADIUM	7.03E+00	1.51E+01	5.09E-08	3.57E-07	7.68E-07	7.00E-03	5E-05	1E-04
ZINC	3.14E+01	8.74E+01	5.09E-08	1.60E-06	4.45E-06	3.00E-01	5E-06	1E-05
<b>HAZARD INDEX</b>							6E-03	2E-02

a Exposure Factor/Child = (200 mg/day \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 6 years \* 365 days/year) = 9.50E-07  
 Exposure Factor/Adult = (100 mg/day \* 13 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 24 years \* 365 days/year) = 5.09E-08  
 b Ingested Dose = Concentration \* Exposure Factor  
 c The subchronic oral protective body dose is used for children and the chronic value is used for adults.

TABLE : 17  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION (PRESENT/YOUTH TRESPASSER)  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure Factor (b)	Average	Maximum	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average	Maximum
		Concentration (a) (mg/kg)	Concentration (mg/kg)		Ingested Dose (c) (mg/kg/day)	Ingested Dose (c) (mg/kg/day)		Increased CA Risk	Increased CA Risk
ACETONE	D	1.10E+00	1.10E+00	1.02E-08	1.12E-08	1.12E-08			
BENZENE	B2	8.00E-02	8.00E-02	1.02E-08	8.14E-10	8.14E-10	2.90E-02	2E-11	2E-11
DI-N-BUTYLPHTHALATE	D	1.70E+01	1.70E+01	1.02E-08	1.73E-07	1.73E-07			
ALDRIN	B2	8.10E+01	8.10E+01	1.02E-08	8.24E-07	8.24E-07	1.70E+01	1E-05	1E-05
AROCLOL 1242	B2	1.40E+04	1.40E+04	1.02E-08	1.42E-04	1.42E-04	7.70E+00	1E-04	1E-04
DIELDRIN	B2	4.70E+01	4.70E+01	1.02E-08	4.78E-07	4.78E-07	1.60E+01	8E-06	8E-06
ALUMINUM	D	1.68E+03	1.68E+03	1.02E-08	1.71E-05	1.71E-05			
ARSENIC	A	3.74E+01	3.74E+01	1.02E-08	3.81E-07	3.81E-07	1.75E+00	7E-07	7E-07
BARIUM	--	5.61E+02	5.61E+02	1.02E-08	5.71E-06	5.71E-06			
CHROMIUM	A	8.90E+00	8.90E+00	1.02E-08	9.06E-08	9.06E-08			
COBALT	--	5.40E+00	5.40E+00	1.02E-08	5.50E-08	5.50E-08			
COPPER	D	1.57E+01	1.57E+01	1.02E-08	1.60E-07	1.60E-07			
CYANIDE	D	6.60E-01	6.60E-01	1.02E-08	6.72E-09	6.72E-09			
LEAD	B2	2.22E+01	2.22E+01	1.02E-08	2.26E-07	2.26E-07			
MANGANESE	D	7.96E+01	7.96E+01	1.02E-08	8.10E-07	8.10E-07			
NICKEL	A	9.50E+00	9.50E+00	1.02E-08	9.67E-08	9.67E-08			
VANADIUM	D	3.34E+01	3.34E+01	1.02E-08	3.40E-07	3.40E-07			
ZINC	D	4.02E+02	4.02E+02	1.02E-08	4.09E-06	4.09E-06			
<b>TOTAL RISK</b>								<b>1E-03</b>	<b>1E-03</b>

- a Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.  
 b Exposure Factor = (100 mg/day \* 13 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 70 years \* 365 days/year) = 1.02 E-08  
 c Ingested Dose = Concentration \* Exposure Factor

TABLE 18  
 SITE: BENNINGTON LANDFILL  
 ENV. MEDIUM: UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE: INCIDENTAL INGESTION/PRESENT/YOUTH TRESPASSER  
 RISK TYPE: NONCARCINOGENIC

Contaminant of Concern	Critical Effect Target Organ (a)	Average	Maximum	Exposure Factor (c)	Average	Maximum	Chronic Oral Protective Body Dose (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
		Concentration (b) (mg/kg)	Concentration (mg/kg)		Ingested Dose (d) (mg/kg/day)	Ingested Dose (d) (mg/kg/day)			
ACETONE		1.10E+00	1.10E+00	7.12E-08	7.84E-08	7.84E-08	1.00E-01	8E-07	8E-07
BENZENE		8.00E-02	8.00E-02	7.12E-08	5.70E-09	5.70E-09			
DI-N-BUTYLPHTHALATE		1.70E+01	1.70E+01	7.12E-08	1.21E-06	1.21E-06	1.00E-01	1E-05	1E-05
ALDRIN		8.10E+01	8.10E+01	7.12E-08	5.77E-06	5.77E-06	3.00E-05	2E-01	2E-01
AROCLOK 1242	reproductive tox.	1.40E+04	1.40E+04	7.12E-08	9.97E-04	9.97E-04	7.00E-05	1E+01	1E+01
DIELDRIN		4.70E+01	4.70E+01	7.12E-08	3.35E-06	3.35E-06	5.00E-05	7E-02	7E-02
ALUMINUM		1.68E+03	1.68E+03	7.12E-08	1.20E-04	1.20E-04			
ARSENIC		3.74E+01	3.74E+01	7.12E-08	2.66E-06	2.66E-06	3.00E-04	9E-03	9E-03
BARIUM		5.61E+02	5.61E+02	7.12E-08	4.00E-05	4.00E-05	7.00E-02	6E-04	6E-04
CHROMIUM		8.90E+00	8.90E+00	7.12E-08	6.34E-07	6.34E-07	5.00E-03	1E-04	1E-04
COBALT		5.40E+00	5.40E+00	7.12E-08	3.85E-07	3.85E-07			
COPPER		1.57E+01	1.57E+01	7.12E-08	1.12E-06	1.12E-06			
CYANIDE		6.60E-01	6.60E-01	7.12E-08	4.70E-08	4.70E-08	2.00E-02	2E-06	2E-06
LEAD		2.22E+01	2.22E+01	7.12E-08	1.58E-06	1.58E-06			
MANGANLSE		7.96E+01	7.96E+01	7.12E-08	5.67E-06	5.67E-06	1.40E-01	4E-05	4E-05
NICKEL		9.50E+00	9.50E+00	7.12E-08	6.77E-07	6.77E-07	2.00E-02	3E-05	3E-05
VANADIUM		3.34E+01	3.34E+01	7.12E-08	2.38E-06	2.38E-06	7.00E-03	3E-04	3E-04
ZINC		4.02E+02	4.02E+02	7.12E-08	2.86E-05	2.86E-05	3.00E-01	1E-04	1E-04
HAZARD INDEX								1E+01	1E+01

- a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1 E-01.
- b Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.
- c Exposure Factor = (100 mg/day \* 13 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 7.12 E-08
- d Ingested Dose = Concentration \* Exposure Factor

Hazard Indexes (by health effect)	Average/ Maximum Exposure
Reproductive Toxicity effect	1E+01
Other effects	3E-01

TABLE : 19  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/PRESENT/YOUTH TRESPASSER  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure Factor (b)	Average	Maximum	Adjusted Oral Slope Factor (d)	Average Increased CA Risk	Maximum Increased CA Risk
		Concentration (a) (mg/kg)	Concentration (mg/kg)		Absorbed Dose (c) (mg/kg/day)	Absorbed Dose (c) (mg/kg/day)			
AROCLOR 1242	R2	1.40E+04	1.40E+04	1.11E-08	1.55E-04	1.55E-04	7.70E+09	1E-03	1E-03
TOTAL RISK								1E-03	1E-03

- a Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.
- b Exposure Factor =  $(1810 \text{ cm}^2 \cdot 1.0 \cdot 0.06 \cdot 13 \text{ days/year} \cdot 10 \text{ years} \cdot 1E-6 \text{ kg/ug}) / (50 \text{ kg} \cdot 70 \text{ years} \cdot 365 \text{ days/year}) = 1.11 E-08$
- c Absorbed Dose = Concentration \* Exposure Factor
- d Divided by oral absorption factor of 1.0 for Aroclor 1242



TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (a) (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (b)	Average Ingested Dose (c) (mg/kg/day)	Maximum Ingested Dose (c) (mg/kg/day)	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
<b>CHILD</b>									
ACETONE	D	1.10E+00	1.10E+00	8.14E-08	8.95E-08	8.95E-08			
BENZENE	B2	8.00E-02	8.00E-02	8.14E-08	6.51E-09	6.51E-09	2.90E-02	2E-10	2E-10
DI-N-BUTYLPHTHALATE	D	1.70E+01	1.70E+01	8.14E-08	1.38E-06	1.38E-06			
ALDRIN	B2	8.10E+01	8.10E+01	8.14E-08	6.59E-06	6.59E-06	1.70E+01	1E-04	1E-04
AROCOR 1242	B2	1.40E+04	1.40E+04	8.14E-08	1.14E-03	1.14E-03	7.70E+00	9E-03	9E-03
DIELDRIN	B2	4.70E+01	4.70E+01	8.14E-08	3.83E-06	3.83E-06	1.60E+01	6E-05	6E-05
ALUMINUM	D	1.68E+03	1.68E+03	8.14E-08	1.37E-04	1.37E-04			
ARSENIC	A	3.74E+01	3.74E+01	8.14E-08	3.04E-06	3.04E-06	1.75E+00	5E-06	5E-06
BARIUM	--	5.61E+02	5.61E+02	8.14E-08	4.57E-05	4.57E-05			
CHROMIUM	A	8.90E+00	8.90E+00	8.14E-08	7.25E-07	7.25E-07			
COBALT	--	5.40E+00	5.40E+00	8.14E-08	4.40E-07	4.40E-07			
COPPER	D	1.57E+01	1.57E+01	8.14E-08	1.28E-06	1.28E-06			
CYANIDE	D	6.60E-01	6.60E-01	8.14E-08	5.37E-08	5.37E-08			
LEAD	B2	2.22E+01	2.22E+01	8.14E-08	1.81E-06	1.81E-06			
MANGANESE	D	7.96E+01	7.96E+01	8.14E-08	6.48E-06	6.48E-06			
NICKEL	A	9.50E+00	9.50E+00	8.14E-08	7.73E-07	7.73E-07			
VANADIUM	D	3.34E+01	3.34E+01	8.14E-08	2.72E-06	2.72E-06			
ZINC	D	4.02E+02	4.02E+02	8.14E-08	3.27E-05	3.27E-05			
<b>ADULT</b>									
ACETONE	D	1.10E+00	1.10E+00	1.74E-08	1.92E-08	1.92E-08			
BENZENE	B2	8.00E-02	8.00E-02	1.74E-08	1.40E-09	1.40E-09	2.90E-02	4E-11	4E-11
DI-N-BUTYLPHTHALATE	D	1.70E+01	1.70E+01	1.74E-08	2.97E-07	2.97E-07			
ALDRIN	B2	8.10E+01	8.10E+01	1.74E-08	1.41E-06	1.41E-06	1.70E+01	2E-05	2E-05
AROCOR 1242	B2	1.40E+04	1.40E+04	1.74E-08	2.44E-04	2.44E-04	7.70E+00	2E-03	2E-03
DIELDRIN	B2	4.70E+01	4.70E+01	1.74E-08	8.20E-07	8.20E-07	1.60E+01	1E-05	1E-05
ALUMINUM	D	1.68E+03	1.68E+03	1.74E-08	2.93E-05	2.93E-05			
ARSENIC	A	3.74E+01	3.74E+01	1.74E-08	6.52E-07	6.52E-07	1.75E+00	1E-06	1E-06
BARIUM	--	5.61E+02	5.61E+02	1.74E-08	9.79E-06	9.79E-06			
CHROMIUM	A	8.90E+00	8.90E+00	1.74E-08	1.55E-07	1.55E-07			
COBALT	--	5.40E+00	5.40E+00	1.74E-08	9.42E-08	9.42E-08			
COPPER	D	1.57E+01	1.57E+01	1.74E-08	2.74E-07	2.74E-07			
CYANIDE	D	6.60E-01	6.60E-01	1.74E-08	1.15E-08	1.15E-08			
LEAD	B2	2.22E+01	2.22E+01	1.74E-08	3.87E-07	3.87E-07			
MANGANESE	D	7.96E+01	7.96E+01	1.74E-08	1.39E-06	1.39E-06			
NICKEL	A	9.50E+00	9.50E+00	1.74E-08	1.66E-07	1.66E-07			
VANADIUM	D	3.34E+01	3.34E+01	1.74E-08	5.83E-07	5.83E-07			
ZINC	D	4.02E+02	4.02E+02	1.74E-08	7.01E-06	7.01E-06			
<b>TOTAL RISK</b>								<b>1E-02</b>	<b>1E-02</b>

- a Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.  
 b Exposure Factor/Child = (200 mg/day \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 70 years \* 365 days/year) = 8.14 E-08  
 Exposure Factor/Adult = (100 mg/day \* 13 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 70 years \* 365 days/year) = 1.74 E-08  
 c Ingested Dose = Concentration \* Exposure Factor

TABLE 22  
 SITE: BENNINGTON LANDFILL  
 ENV. MEDIUM: UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE: INCIDENTAL INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE: NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Average Concentration (b) (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (c)	Average Ingested Dose (d) (mg/kg/day)	Maximum Ingested Dose (d) (mg/kg/day)	Oral Protective Body Dose (e) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
<b>CHILD</b>									
ACETONE		1.10E+00	1.10E+00	9.50E-07	1.04E-06	1.04E-06	1.00E+00	1E-06	1E-06
BENZENE		8.00E-02	8.00E-02	9.50E-07	7.60E-08	7.60E-08			
DI-N-BUTYLPHTHALATE		1.70E+01	1.70E+01	9.50E-07	1.61E-05	1.61E-05	1.60E+00		2E-05
ALDRIN	liver	8.10E+01	8.10E+01	9.50E-07	7.69E-05	7.69E-05	3.00E-05	3E+00	3E+00
AROCLOR 1242	reproductive tox.	1.40E+04	1.40E+04	9.50E-07	1.33E-02	1.33E-02	7.00E-05	2E+02	2E+02
DIELDRIN	liver	4.70E+01	4.70E+01	9.50E-07	4.46E-05	4.46E-05	5.00E-05	9E-01	9E-01
ALUMINUM		1.68E+03	1.68E+03	9.50E-07	1.60E-03	1.60E-03			
ARSENIC	skin/Vascular	3.74E+01	3.74E+01	9.50E-07	3.55E-05	3.55E-05	3.00E-04	1E-01	1E-01
BARIUM		5.61E+02	5.61E+02	9.50E-07	5.33E-04	5.33E-04	7.00E-02	8E-03	8E-03
CHROMIUM		8.90E+00	8.90E+00	9.50E-07	8.45E-06	8.45E-06	2.00E-02	4E-04	4E-04
COBALT		5.40E+00	5.40E+00	9.50E-07	5.13E-06	5.13E-06			
COPPER		1.57E+01	1.57E+01	9.50E-07	1.49E-05	1.49E-05			
CYANIDE		6.60E-01	6.60E-01	9.50E-07	6.27E-07	6.27E-07	2.00E-02	3E-05	3E-05
LEAD		2.22E+01	2.22E+01	9.50E-07	2.11E-05	2.11E-05			
MANGANESE		7.96E+01	7.96E+01	9.50E-07	7.56E-05	7.56E-05	1.40E-01	5E-04	5E-04
NICKEL		9.50E+00	9.50E+00	9.50E-07	9.02E-06	9.02E-06	2.00E-02	5E-04	5E-04
VANADIUM		3.34E+01	3.34E+01	9.50E-07	3.17E-05	3.17E-05	7.00E-03	5E-03	5E-03
ZINC		4.02E+02	4.02E+02	9.50E-07	3.82E-04	3.82E-04	3.00E-01	1E-03	1E-03
<b>HAZARD INDEX</b>								<b>2E+02</b>	<b>2E+02</b>
<b>ADULT</b>									
ACETONE		1.10E+00	1.10E+00	5.09E-08	5.60E-08	5.60E-08	1.00E-01	6E-07	6E-07
BENZENE		8.00E-02	8.00E-02	5.09E-08	4.07E-09	4.07E-09			
DI-N-BUTYLPHTHALATE		1.70E+01	1.70E+01	5.09E-08	8.65E-07	8.65E-07	1.00E-01	9E-06	9E-06
ALDRIN	liver	8.10E+01	8.10E+01	5.09E-08	4.12E-06	4.12E-06	3.00E-05	1E-01	1E-01
AROCLOR 1242	reproductive tox.	1.40E+04	1.40E+04	5.09E-08	7.12E-04	7.12E-04	7.00E-05	1E+01	1E+01
DIELDRIN		4.70E+01	4.70E+01	5.09E-08	2.39E-06	2.39E-06	5.00E-05	5E-02	5E-02
ALUMINUM		1.68E+03	1.68E+03	5.09E-08	8.55E-05	8.55E-05			
ARSENIC		3.74E+01	3.74E+01	5.09E-08	1.90E-06	1.90E-06	3.00E-04	6E-03	6E-03
BARIUM		5.61E+02	5.61E+02	5.09E-08	2.85E-05	2.85E-05	7.00E-02	4E-04	4E-04
CHROMIUM		8.90E+00	8.90E+00	5.09E-08	4.53E-07	4.53E-07	5.00E-03	9E-05	9E-05
COBALT		5.40E+00	5.40E+00	5.09E-08	2.75E-07	2.75E-07			
COPPER		1.57E+01	1.57E+01	5.09E-08	7.99E-07	7.99E-07			
CYANIDE		6.60E-01	6.60E-01	5.09E-08	3.36E-08	3.36E-08	2.00E-02	2E-06	2E-06
LEAD		2.22E+01	2.22E+01	5.09E-08	1.13E-06	1.13E-06			
MANGANESE		7.96E+01	7.96E+01	5.09E-08	4.05E-06	4.05E-06	1.40E-01	3E-05	3E-05
NICKEL		9.50E+00	9.50E+00	5.09E-08	4.83E-07	4.83E-07	2.00E-02	2E-05	2E-05
VANADIUM		3.34E+01	3.34E+01	5.09E-08	1.70E-06	1.70E-06	7.00E-03	2E-04	2E-04
ZINC		4.02E+02	4.02E+02	5.09E-08	2.05E-05	2.05E-05	3.00E-01	7E-05	7E-05
<b>HAZARD INDEX</b>								<b>1E+01</b>	<b>1E+01</b>

- a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1E-01.
- b Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.
- c Exposure Factor/Child = (200 mg/day \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 6 years \* 365 days/year) = 9.50E-07
- d Exposure Factor/Adult = (100 mg/day \* 13 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 24 years \* 365 days/year) = 5.09E-08
- e Ingested Dose = Concentration \* Exposure Factor
- f The subchronic oral protective body dose is used for children and the chronic value is used for adults.

Hazard Indices (by health effect)	Avg./Max. Exposure (Child)	Avg./Max. Exposure (Adult)
Liver effect	3E+00	1E-01
Reproductive Toxicity effect	2E+02	1E+01
Skin/Vascular effect	1E-01	---
Other effects	2E-02	5E-02

TABLE : 2  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure Factor (b)	Average	Maximum	Adjusted Oral Slope Factor (d)	Average Increased CA Risk	Maximum Increased CA Risk
		Concentration (a) (mg/kg)	Concentration (mg/kg)		Absorbed Dose (c) (mg/kg/day)	Absorbed Dose (c) (mg/kg/day)			
CHILD AROCOLOR 1242	H2	1.40E+04	1.40E+04	2.14E-08	3.00E-04	3.00E-04	7.70E+00	2E-03	2E-03
ADULT AROCOLOR 1242	H2	1.40E+04	1.40E+04	2.41E-08	3.37E-04	3.37E-04	7.70E+00	3E-03	9E-03
TOTAL RISK								5E-03	9E-03

- a Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.  
 b Exposure Factor/Child =  $(876 \text{ cm}^2 * 1.0 * 0.06 * 26 \text{ days/year} * 6 \text{ years} * 1\text{E-}6 \text{ kg/mg}) / (15 \text{ kg} * 70 \text{ years} * 365 \text{ days/year}) = 2.14 \text{ E-}08$   
 Exposure Factor/Adult =  $(2300 \text{ cm}^2 * 1.0 * 0.06 * 13 \text{ days/year} * 24 \text{ years} * 1\text{E-}6 \text{ kg/mg}) / (70 \text{ kg} * 70 \text{ years} * 365 \text{ days/year}) = 2.41 \text{ E-}08$   
 c Absorbed Dose = Concentration \* Exposure Factor  
 d Divided by oral absorption factor of 1.0 for Aroclor 1242

TABLE 24  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : UNDERDRAIN SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Critical Effect/Target Organ (a)	Average Concentration (b) (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (c)	Average Absorbed Dose (d) (mg/kg/day)	Maximum Absorbed Dose (d) (mg/kg/day)	Adjusted Protective Body Dose (e) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
CHILD AROCLOK 1242	Reproductive tox	1.40E+04	1.40E+04	2.50E-07	3.49E-03	3.49E-03	7.00E-05	5E+01	5E+01
								HAZARD INDEX	5E+01
ADULT AROCLOK 1242	Reproductive tox	1.40E+04	1.40E+04	7.02E-08	9.83E-04	9.83E-04	7.00E-05	1E+01	1E+01
								HAZARD INDEX	1E+01

- a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1 E-01.
- b Average concentration equal to maximum concentration because risk evaluation of underdrain sediments is based on one sample.
- c Exposure Factor/Child =  $(876 \text{ cm}^2 \cdot 1.0 \cdot 0.06 \cdot 26 \text{ days/year} \cdot 6 \text{ years} \cdot 1\text{E-}6 \text{ kg/mg}) / (15 \text{ kg} \cdot 6 \text{ years} \cdot 365 \text{ days/year}) = 2.50 \text{ E-}07$   
 Exposure Factor/Adult =  $(2300 \text{ cm}^2 \cdot 1.0 \cdot 0.06 \cdot 13 \text{ days/year} \cdot 24 \text{ years} \cdot 1\text{E-}6 \text{ kg/mg}) / (70 \text{ kg} \cdot 24 \text{ years} \cdot 365 \text{ days/year}) = 7.02 \text{ E-}08$
- d Absorbed Dose = Concentration \* Exposure Factor
- e Multiplied by oral absorption factor of 1.0 for Aroclor 1242  
 The subchronic oral RfD is used for children and the chronic value is used for adults.

Hazard Indices (by health effect)	Avg./Max. Exposure (Child)	Avg./Max. Exposure (Adult)
Reproductive Toxicity effect	5E+01	1E+01

TABLE 1  
 SITE  
 ENVIRONMENTAL  
 EXPOSURE TYPE  
 RISK TYPE

BENNINGTON LANDFILL  
 DRAINAGE POND SEDIMENTS  
 INCIDENTAL INGESTION/PRESENTLY OUTH TRESPASSER  
 CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Ingested Dose (b) (mg/kg/day)	Maximum Ingested Dose (b) (mg/kg/day)	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
ACETONE	D	6.07E-01	1.10E+00	1.02E-08	6.18E-08	1.12E-08			
TOLUENE	D	3.36E-02	6.00E-03	1.02E-08	3.96E-10	6.11E-11			
1,4-DICHLOROBENZENE	C	2.04E-01	1.10E-01	1.02E-08	2.07E-08	1.12E-09	2.44E+02	5E-11	9E-11
2-METHYLNAPHTHALENE	--	1.94E-03	9.10E-02	1.02E-08	1.98E-09	9.26E-10			
BENZOAANTHRACENE	B2	2.09E-01	1.20E-01	1.02E-08	2.12E-09	1.22E-09	7.30E+00	2E-08	9E-09
BENZOPYRENE	B2	1.99E-01	1.00E-01	1.02E-08	2.02E-09	1.02E-09	7.30E+00	1E-08	7E-09
BENZOFLUORANTHENE	B2	2.64E-03	2.30E-01	1.02E-08	2.68E-09	2.34E-09	7.30E+00	2E-08	2E-08
CHRYSENE	B2	2.19E-01	1.40E-01	1.02E-08	2.23E-09	1.42E-09	7.30E+00	2E-08	1E-08
DI-N-BUTYLPHTHALATE	D	2.36E-01	7.80E-02	1.02E-08	2.41E-09	7.94E-10			
FLUORANTHENE	D	2.79E-01	2.60E-01	1.02E-08	2.84E-09	2.65E-09			
N-NITROSO-DE-N-PROPYLAMINE	B2	3.04E-01	3.10E-01	1.02E-08	3.09E-09	3.15E-09	7.00E+00	2E-08	2E-08
NAPHTHALENE	D	2.19E-01	1.40E-01	1.02E-08	2.23E-09	1.42E-09			
PYRENE	D	2.79E-01	2.60E-01	1.02E-08	2.84E-09	2.65E-09			
4,4'-DDE	B2	8.55E-02	9.30E-02	1.02E-08	8.70E-11	9.46E-10	5.40E+01	5E-10	3E-11
AROCLOR 1242	B2	8.69E+01	1.00E+02	1.02E-08	8.75E-07	1.02E-06	7.70E+00	7E-06	8E-07
ALUMINUM	D	7.65E+03	9.61E+03	1.02E-08	7.79E-05	9.78E-05			
ARSENIC	A	2.02E+03	2.75E+01	1.02E-08	2.06E-07	2.80E-07	1.75E+00	4E-07	5E-07
BARIUM	--	5.08E+02	5.08E+02	1.02E-08	5.17E-06	5.17E-06			
BERYLLIUM	B2	3.17E-01	3.95E-01	1.02E-08	3.24E-09	4.02E-09	4.30E+00	1E-08	2E-08
CHROMIUM	A	1.46E+01	1.65E+01	1.02E-08	1.49E-07	1.68E-07			
COBALT	--	9.57E+00	1.21E+01	1.02E-08	9.74E-08	1.24E-07			
COPPER	D	3.24E+01	3.27E+01	1.02E-08	3.30E-07	3.33E-07			
CYANIDE	D	3.05E-01	4.10E-01	1.02E-08	3.10E-09	4.17E-09			
LEAD	B2	1.44E+02	1.69E+02	1.02E-08	1.46E-06	1.72E-06			
MANGANESE	D	5.72E+02	8.07E+02	1.02E-08	5.82E-06	8.21E-06			
MERCURY	D	2.35E-01	2.40E-01	1.02E-08	2.39E-09	2.44E-09			
NICKEL	A	1.46E+01	1.69E+01	1.02E-08	1.49E-07	1.72E-07			
VANADIUM	D	1.45E+01	1.53E+01	1.02E-08	1.48E-07	1.56E-07			
ZINC	D	2.17E+02	2.21E+02	1.02E-08	2.21E-06	2.25E-06			
<b>TOTAL RISK</b>								<b>7E-06</b>	<b>8E-06</b>

a Exposure Factor = (100 mg/day \* 13 days/year \* 10 years \* 1E-6 kg/mg)/50 kg \* 70 years \* 365 days/year = 1.02 E-08  
 Ingested Dose = Concentration \* Exposure Factor

TABLE 26  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : DRAINAGE POND SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION/PRESENT/YOUTH TRESPASSER  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Ingested Dose (b) (mg/kg/day)	Maximum Ingested Dose (b) (mg/kg/day)	Chronic Oral Protective Body Dose (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
ACETONE	6.08E-01	1.10E+00	7.12E-08	4.33E-08	7.84E-08	1.00E-01	4E-07	8E-07
TOLUENE	3.30E-02	6.00E-03	7.12E-08	2.35E-09	4.27E-10	2.60E-01	1E-08	2E-09
1,4-DICHLOROBENZENE	2.04E-01	1.10E-01	7.12E-08	1.45E-08	7.84E-09	3.00E-01	5E-08	3E-08
2-METHYLNAPHTHALENE	1.94E-01	9.10E-02	7.12E-08	1.38E-08	6.48E-09			
BENZO(A)ANTHRACENE	2.09E-01	1.20E-01	7.12E-08	1.49E-08	8.55E-09			
BENZO(A)PYRENE	1.99E-01	1.00E-01	7.12E-08	1.42E-08	7.12E-09			
BENZO(B)FLUORANTHENE	2.64E-01	2.30E-01	7.12E-08	1.88E-08	1.64E-08			
CHRYSENE	2.19E-01	1.40E-01	7.12E-08	1.56E-08	9.97E-09			
DI-N-BUTYLPHTHALATE	2.37E-01	7.80E-02	7.12E-08	1.68E-08	5.56E-09	1.00E-01	2E-07	6E-08
FLUORANTHENE	2.79E-01	2.60E-01	7.12E-08	1.99E-08	1.85E-08	4.00E-02	5E-07	5E-07
N-NITROSO-DI-N-PROPYLAM	3.04E-01	3.10E-01	7.12E-08	2.16E-08	2.21E-08			
NAPHTHALENE	2.19E-01	1.40E-01	7.12E-08	1.56E-08	9.97E-09	4.00E-02	4E-07	2E-07
PYRENE	2.79E-01	2.60E-01	7.12E-08	1.99E-08	1.85E-08	3.00E-02	7E-07	6E-07
4,4'-DDE	8.55E-02	9.30E-02	7.12E-08	6.09E-09	6.62E-09			
AROCLOR 1242	8.63E+01	1.00E+02	7.12E-08	6.14E-06	7.12E-06	7.00E-05	9E-02	1E-01
ALUMINUM	7.65E+03	9.61E+03	7.12E-08	5.45E-04	6.85E-04			
ARSENIC	2.02E+01	2.75E+01	7.12E-08	1.44E-06	1.96E-06	3.00E-04	5E-03	7E-03
BARIUM	5.08E+02	5.08E+02	7.12E-08	3.62E-05	3.62E-05	7.00E-02	5E-04	5E-04
BERYLLIUM	3.18E-01	3.95E-01	7.12E-08	2.26E-08	2.81E-08	5.00E-03	5E-06	6E-06
CHROMIUM	1.46E+01	1.65E+01	7.12E-08	1.04E-06	1.18E-06	5.00E-03	2E-04	2E-04
COBALT	9.58E+00	1.21E+01	7.12E-08	6.82E-07	8.65E-07			
COPPER	3.25E+01	3.27E+01	7.12E-08	2.31E-06	2.33E-06			
CYANIDE	3.05E-01	4.10E-01	7.12E-08	2.17E-08	2.92E-08	2.00E-02	1E-06	1E-06
LEAD	1.44E+02	1.69E+02	7.12E-08	1.02E-05	1.20E-05			
MANGANESE	5.72E+02	8.07E+02	7.12E-08	4.08E-05	5.74E-05	1.40E-01	3E-04	4E-04
MERCURY	2.55E-01	2.40E-01	7.12E-08	1.67E-08	1.71E-08	3.00E-04	6E-05	6E-05
NICKEL	1.46E+01	1.69E+01	7.12E-08	1.04E-06	1.20E-06	2.00E-02	5E-05	6E-05
VANADIUM	1.45E+01	1.53E+01	7.12E-08	1.03E-06	1.09E-06	7.00E-03	1E-04	2E-04
ZINC	2.17E+02	2.21E+02	7.12E-08	1.54E-05	1.57E-05	3.00E-01	5E-05	5E-05
<b>HAZARD INDEX</b>							<b>9E-02</b>	<b>1E-01</b>

a Exposure Factor = (100 mg/day \* 13 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 7.12 E-08  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENVIRONMENT : DRAINAGE POND SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/PRESENCE OF THE TRESPASSER  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Exposure Factor (a)	Average	Maximum	Adjusted Oral Slope Factor (c)	Average Increased CA Risk	Maximum Increased CA Risk
		Concentration (mg/kg)	Concentration (mg/kg)		Absorbed Dose (b) (mg/kg/day)	Absorbed Dose (b) (mg/kg/day)			
AROCFLOR 1242	B2	8.63E+02	1.00E+02	1.11E-08	9.58E-07	1.11E-06	7.70E+00	7E-06	5E-05
TOTAL RISK								7E-06	5E-05

- a Exposure Factor = (1810 cm<sup>2</sup> \* 1.0 \* 0.06 \* 13 days/year \* 10 years \* 1E-6 kg/m<sup>2</sup>)/(50 kg \* 70 years \* 365 days/year) = 1.11E-08
- b Absorbed Dose = Concentration \* Exposure Factor
- c Divided by oral absorption factor of 1.0 for Aroclor 1242

SITE : 26  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : DRAINAGE POND SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/PRESENT/YOUTH TRESPASSER  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration	Maximum Concentration	Exposure Factor (a)	Average Absorbed Dose (b)	Maximum Absorbed Dose (b)	Adjusted Chronic Protective Body Dose (c)	Average Hazard Quotient	Maximum Hazard Quotient	
	(mg/kg)	(mg/kg)		(mg/kg/day)	(mg/kg/day)	(mg/kg/day)			
AROC/ OR 1242	8.63E+01	1.00E+02	7.74E-08	6.68E-06	7.74E-06	7.00E-05	1E-01	1E-01	
HAZARD INDEX								1E-01	1E-01

- a Exposure Factor = (1810 cm<sup>2</sup> \* 1.0 \* 0.06 \* 18 days/year \* 10 years \* 1E-6 kg/mg)/(50 kg \* 10 years \* 365 days/year) = 7.74 E-08
- b Absorbed Dose = Concentration \* Exposure Factor
- c Multiplied by oral absorption factor of 1.0 for Aroclor 1242

TABLE 1  
 ENV. MEDIUM  
 EXPOSURE TYPE  
 RISK TYPE

2  
 BENNINGTON LANDFILL  
 DRAINAGE POND SEDIMENTS  
 INCIDENTAL INGESTION/FUTURE ADJACENT RESIDENT  
 CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Ingested Dose (b) (mg/kg/day)	Maximum Ingested Dose (b) (mg/kg/day)	Oral Slope Factor	Average Increased CA Risk	Maximum Increased CA Risk
<b>CHILD</b>									
ACETONE	I	6.07E-01	1.10E+00	8.14E-08	4.95E-08	8.95E-08			
TOLUENE	D	3.30E-02	6.00E-03	8.14E-08	2.64E-08	4.88E-08			
1,4-DICHLOROBENZENE	C	2.04E-01	1.10E-01	8.14E-08	1.64E-08	8.95E-08	2.40E-02	4E-10	2E-10
2-METHYLNAPHTHALENE	--	1.94E-01	9.10E-02	8.14E-08	1.58E-08	7.41E-08			
BENZO(A)ANTHRACENE	B2	2.09E-01	1.20E-01	8.14E-08	1.23E-08	9.77E-09	7.30E+00	1E-07	7E-08
BENZO(A)PYRENE	B2	1.99E-01	1.00E-01	8.14E-08	1.62E-08	8.14E-08	7.30E+00	1E-07	6E-08
BENZO(B)FLUORANTHENE	B2	2.64E-01	2.30E-01	8.14E-08	2.15E-08	1.87E-08	7.30E+00	2E-07	1E-07
CHRYSENE	B2	2.19E-01	1.40E-01	8.14E-08	1.78E-08	1.14E-08	7.30E+00	1E-07	8E-08
DI-N-BUTYLPHTHALATE	D	2.36E-01	7.80E-02	8.14E-08	1.94E-08	6.35E-09			
FLUORANTHENE	D	2.79E-01	2.60E-01	8.14E-08	2.27E-08	2.12E-08			
N-NITROSO-DI-N-PROPYLAMINE	B2	3.04E-01	3.10E-01	8.14E-08	2.47E-08	2.52E-08	7.30E+00	7E-07	2E-07
NAPHTHALENE	D	2.19E-01	1.40E-01	8.14E-08	1.78E-08	1.14E-08			
PYRENE	D	2.79E-01	2.60E-01	8.14E-08	2.27E-08	2.12E-08			
4,4'-DDE	B2	8.55E-02	9.30E-02	8.14E-08	6.99E-09	7.57E-09	3.40E-01	2E-09	8E-09
AROCOLOR 1242	B2	8.63E+01	1.00E+02	8.14E-08	7.07E-08	8.14E-08	7.70E+00	5E-05	6E-05
ALUMINUM	D	7.65E+03	9.61E+03	8.14E-08	6.22E-04	7.82E-04			
ARSENIC	A	2.02E+01	2.75E+01	8.14E-08	1.64E-06	2.24E-06	1.75E+00	4E-06	4E-06
BARIUM	--	5.08E+02	5.08E+02	8.14E-08	4.14E-05	4.14E-05			
BERYLLIUM	B2	3.17E-01	3.95E-01	8.14E-08	2.58E-08	3.22E-08	4.30E+00	1E-07	1E-07
CHROMIUM	A	1.46E+01	1.65E+01	8.14E-08	1.19E-06	1.34E-06			
COBALT	--	9.57E+00	1.21E+01	8.14E-08	7.79E-07	9.89E-07			
COPPER	D	3.24E+01	3.27E+01	8.14E-08	2.64E-06	2.66E-06			
CYANIDE	D	3.05E-01	4.10E-01	8.14E-08	2.48E-08	3.34E-08			
LEAD	B2	1.44E+02	1.69E+02	8.14E-08	1.17E-05	1.38E-05			
MANGANESE	D	5.72E+02	8.07E+02	8.14E-08	4.66E-05	6.57E-05			
MERCURY	D	2.35E-01	2.40E-01	8.14E-08	1.91E-08	1.95E-08			
NICKEL	A	1.46E+01	1.69E+01	8.14E-08	1.19E-06	1.38E-06			
VANADIUM	D	1.45E+01	1.53E+01	8.14E-08	1.18E-06	1.25E-06			
ZINC	D	2.17E+02	2.21E+02	8.14E-08	1.76E-05	1.80E-05			
<b>ADULT</b>									
ACETONE	D	6.07E-01	1.10E+00	1.74E-08	1.06E-08	1.92E-08			
TOLUENE	D	3.30E-02	6.00E-03	1.74E-08	5.76E-10	1.05E-10			
1,4-DICHLOROBENZENE	C	2.04E-01	1.10E-01	1.74E-08	3.55E-09	1.92E-09	2.40E-02	9E-11	5E-11
2-METHYLNAPHTHALENE	--	1.94E-01	9.10E-02	1.74E-08	3.39E-09	1.59E-09			
BENZO(A)ANTHRACENE	B2	2.09E-01	1.20E-01	1.74E-08	3.64E-09	2.09E-09	7.30E+00	3E-08	2E-08
BENZO(A)PYRENE	B2	1.99E-01	1.00E-01	1.74E-08	3.47E-09	1.74E-09	7.30E+00	3E-08	1E-08
BENZO(B)FLUORANTHENE	B2	2.64E-01	2.30E-01	1.74E-08	4.60E-09	4.01E-09	7.30E+00	3E-08	3E-08
CHRYSENE	B2	2.19E-01	1.40E-01	1.74E-08	3.82E-09	2.44E-09	7.30E+00	3E-08	2E-08
DI-N-BUTYLPHTHALATE	D	2.36E-01	7.80E-02	1.74E-08	4.13E-09	1.36E-09			
FLUORANTHENE	D	2.79E-01	2.60E-01	1.74E-08	4.86E-09	4.54E-09			
N-NITROSO-DI-N-PROPYLAMINE	B2	3.04E-01	3.10E-01	1.74E-08	5.30E-09	5.41E-09	7.00E+00	4E-08	4E-08
NAPHTHALENE	D	2.19E-01	1.40E-01	1.74E-08	3.82E-09	2.44E-09			
PYRENE	D	2.79E-01	2.60E-01	1.74E-08	4.86E-09	4.54E-09			
4,4'-DDE	B2	8.55E-02	9.30E-02	1.74E-08	1.49E-09	1.62E-09	3.40E-01	5E-10	6E-10
AROCOLOR 1242	B2	8.63E+01	1.00E+02	1.74E-08	1.50E-06	1.74E-06	7.70E+00	1E-05	1E-05
ALUMINUM	D	7.65E+03	9.61E+03	1.74E-08	1.33E-04	1.68E-04			
ARSENIC	A	2.02E+01	2.75E+01	1.74E-08	3.52E-07	4.80E-07	1.75E+00	6E-07	8E-07
BARIUM	--	5.08E+02	5.08E+02	1.74E-08	8.86E-06	8.86E-06			
BERYLLIUM	B2	3.17E-01	3.95E-01	1.74E-08	5.54E-09	6.89E-09	4.30E+00	2E-08	3E-08
CHROMIUM	A	1.46E+01	1.65E+01	1.74E-08	2.55E-07	2.88E-07			
COBALT	--	9.57E+00	1.21E+01	1.74E-08	1.67E-07	2.12E-07			
COPPER	D	3.24E+01	3.27E+01	1.74E-08	5.66E-07	5.70E-07			
CYANIDE	D	3.05E-01	4.10E-01	1.74E-08	5.32E-09	7.15E-09			
LEAD	B2	1.44E+02	1.69E+02	1.74E-08	2.51E-06	2.95E-06			
MANGANESE	D	5.72E+02	8.07E+02	1.74E-08	9.98E-06	1.41E-05			
MERCURY	D	2.35E-01	2.40E-01	1.74E-08	4.10E-09	4.19E-09			
NICKEL	A	1.46E+01	1.69E+01	1.74E-08	2.55E-07	2.95E-07			
VANADIUM	D	1.45E+01	1.53E+01	1.74E-08	2.53E-07	2.67E-07			
ZINC	D	2.17E+02	2.21E+02	1.74E-08	3.78E-06	3.86E-06			
<b>TOTAL RISK</b>								<b>7E-05</b>	<b>8E-05</b>

- a Exposure Factor/Child = (200 mg/day \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 70 years \* 365 days/year) = 8.14 E-08  
 Exposure Factor/Adult = (100 mg/day \* 13 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 70 years \* 365 days/year) = 1.74 E-08  
 b Ingested Dose = Concentration \* Exposure Factor

TABLE 1  
 SITE : 80  
 NAME : BENNINGTON LANDFILL  
 ENV. MEDIUM : DRAINAGE POND SEDIMENTS  
 EXPOSURE TYPE : INCIDENTAL INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Critical Effect/ Target Organ (a)	Average	Maximum	Exposure	Average	Maximum	Oral	Average	Maximum
		Concentration (mg/kg)	Concentration (mg/kg)	Factor (b)	Ingested Dose (c) (mg/kg/day)	Ingested Dose (c) (mg/kg/day)	Protective Body Dose (d) (mg/kg/day)	Hazard Quotient	Hazard Quotient
CHILD									
ACETONE		6.08E-01	1.10E+00	9.50E-07	5.77E-07	1.04E-06	1.00E+00	6E-07	1E-06
TOLUENE		3.30E-02	6.00E-03	9.50E-07	3.13E-08	5.70E-09	2.00E+00	2E-08	3E-09
1,4-DICHLOROBENZENE		2.04E-01	1.10E-01	9.50E-07	1.94E-07	1.04E-07	3.00E-01	6E-07	3E-07
2-METHYLNAPHTHALENE		1.94E-01	9.10E-02	9.50E-07	1.84E-07	8.64E-08			
BENZO(A)ANTHRACENE		2.09E-01	1.20E-01	9.50E-07	1.98E-07	1.14E-07			
BENZO(A)PYRENE		1.99E-01	1.00E-01	9.50E-07	1.89E-07	9.50E-08			
BENZO(B)FLUORANTHENE		2.64E-01	2.30E-01	9.50E-07	2.51E-07	2.18E-07			
CHRYSENE		2.19E-01	1.40E-01	9.50E-07	2.08E-07	1.33E-07			
DI-N-BUTYLPHTHALATE		2.37E-01	7.80E-02	9.50E-07	2.25E-07	7.41E-08	1.00E+00	2E-07	7E-08
FLUORANTHENE		2.79E-01	2.60E-01	9.50E-07	2.65E-07	2.47E-07	4.0E-01	7E-07	6E-07
N-NITROSO-DI-N-PROPYLAMINE		3.04E-01	3.10E-01	9.50E-07	2.88E-07	2.94E-07			
NAPHTHALENE		2.19E-01	1.40E-01	9.50E-07	2.08E-07	1.33E-07	4.0E-02	5E-06	3E-06
PYRENE		2.79E-01	2.60E-01	9.50E-07	2.65E-07	2.47E-07	3.00E-01	5E-07	8E-07
4,4'-DDE		8.55E-02	9.30E-02	9.50E-07	8.12E-08	8.83E-08			
AROCOLOR 1242	reproductive tox.	8.63E+01	1.00E+02	9.50E-07	8.19E-05	9.50E-05	7.0E-05	1E+00	1E+00
ALUMINUM		7.65E+03	9.61E+03	9.50E-07	7.26E-03	9.13E-03			
ARSENIC		2.02E+01	2.75E+01	9.50E-07	1.92E-05	2.61E-05	3.00E-04	6E-02	9E-02
BARIUM		5.08E+02	5.08E+02	9.50E-07	4.82E-04	4.82E-04	7.00E-02	7E-03	7E-03
BERYLLIUM		3.18E-01	3.95E-01	9.50E-07	3.02E-07	3.75E-07	5.00E-03	6E-05	8E-05
CHROMIUM		1.46E+01	1.65E+01	9.50E-07	1.39E-05	1.57E-05	2.00E-02	7E-04	8E-04
COBALT		9.58E+00	1.21E+01	9.50E-07	9.09E-06	1.15E-05			
COPPER		3.25E+01	3.27E+01	9.50E-07	3.08E-05	3.11E-05			
CYANIDE		3.05E-01	4.10E-01	9.50E-07	2.90E-07	3.89E-07	2.00E-02	1E-05	2E-05
LEAD		1.44E+02	1.69E+02	9.50E-07	1.37E-04	1.61E-04			
MANGANESE		5.72E+02	8.07E+02	9.50E-07	5.44E-04	7.66E-04	1.40E-01	4E-03	5E-03
MERCURY		2.35E-01	2.40E-01	9.50E-07	2.23E-07	2.28E-07	3.00E-04	7E-04	8E-04
NICKEL		1.46E+01	1.69E+01	9.50E-07	1.39E-05	1.61E-05	2.00E-02	7E-04	8E-04
VANADIUM		1.45E+01	1.53E+01	9.50E-07	1.38E-05	1.45E-05	7.00E-03	2E-03	2E-03
ZINC		2.17E+02	2.21E+02	9.50E-07	2.06E-04	2.10E-04	3.00E-01	7E-04	7E-04
							HAZARD INDEX	1E+00	1E+00
ADULT									
ACETONE		6.08E-01	1.10E+00	5.09E-08	3.09E-08	5.60E-08	1.00E-01	3E-07	6E-07
TOLUENE		3.30E-02	6.00E-03	5.09E-08	1.68E-09	3.05E-10	2.00E-01	8E-09	2E-09
1,4-DICHLOROBENZENE		2.04E-01	1.10E-01	5.09E-08	1.04E-08	5.60E-09	3.00E-01	3E-08	2E-08
2-METHYLNAPHTHALENE		1.94E-01	9.10E-02	5.09E-08	9.88E-09	4.63E-09			
BENZO(A)ANTHRACENE		2.09E-01	1.20E-01	5.09E-08	1.06E-08	6.11E-09			
BENZO(A)PYRENE		1.99E-01	1.00E-01	5.09E-08	1.01E-08	5.09E-09			
BENZO(B)FLUORANTHENE		2.64E-01	2.30E-01	5.09E-08	1.34E-08	1.17E-08			
CHRYSENE		2.19E-01	1.40E-01	5.09E-08	1.11E-08	7.12E-09			
DI-N-BUTYLPHTHALATE		2.37E-01	7.80E-02	5.09E-08	1.20E-08	3.97E-09	1.00E-01	1E-07	4E-08
FLUORANTHENE		2.79E-01	2.60E-01	5.09E-08	1.42E-08	1.32E-08	4.00E-02	4E-07	3E-07
N-NITROSO-DI-N-PROPYLAMINE		3.04E-01	3.10E-01	5.09E-08	1.55E-08	1.58E-08			
NAPHTHALENE		2.19E-01	1.40E-01	5.09E-08	1.11E-08	7.12E-09	4.00E-02	3E-07	2E-07
PYRENE		2.79E-01	2.60E-01	5.09E-08	1.42E-08	1.32E-08	3.00E-02	5E-07	4E-07
4,4'-DDE		8.55E-02	9.30E-02	5.09E-08	4.35E-09	4.73E-09			
AROCOLOR 1242		8.63E+01	1.00E+02	5.09E-08	4.39E-06	5.09E-06	7.00E-05	6E-02	7E-02
ALUMINUM		7.65E+03	9.61E+03	5.09E-08	3.89E-04	4.89E-04			
ARSENIC		2.02E+01	2.75E+01	5.09E-08	1.03E-06	1.40E-06	3.00E-04	3E-03	5E-03
BARIUM		5.08E+02	5.08E+02	5.09E-08	2.58E-05	2.58E-05	7.00E-02	4E-04	4E-04
BERYLLIUM		3.18E-01	3.95E-01	5.09E-08	1.62E-08	2.01E-08	5.00E-03	3E-06	4E-06
CHROMIUM		1.46E+01	1.65E+01	5.09E-08	7.43E-07	8.40E-07	5.00E-03	1E-04	2E-04
COBALT		9.58E+00	1.21E+01	5.09E-08	4.87E-07	6.18E-07			
COPPER		3.25E+01	3.27E+01	5.09E-08	1.65E-06	1.66E-06			
CYANIDE		3.05E-01	4.10E-01	5.09E-08	1.55E-08	2.09E-08	2.00E-02	8E-07	1E-06
LEAD		1.44E+02	1.69E+02	5.09E-08	7.31E-06	8.60E-06			
MANGANESE		5.72E+02	8.07E+02	5.09E-08	2.91E-05	4.10E-05	1.40E-01	2E-04	3E-04
MERCURY		2.35E-01	2.40E-01	5.09E-08	1.20E-08	1.22E-08	3.00E-04	4E-05	4E-05
NICKEL		1.46E+01	1.69E+01	5.09E-08	7.43E-07	8.60E-07	2.00E-02	4E-05	4E-05
VANADIUM		1.45E+01	1.53E+01	5.09E-08	7.38E-07	7.78E-07	7.00E-03	1E-04	1E-04
ZINC		2.17E+02	2.21E+02	5.09E-08	1.10E-05	1.12E-05	3.00E-01	4E-05	4E-05
							HAZARD INDEX	7E-02	8E-02

- a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1E-01.
- b Exposure Factor/Child = (200 mg/day \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 6 years \* 365 days/year) = 9.50E-07  
 Exposure Factor/Adult = (100 mg/day \* 13 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 24 years \* 365 days/year) = 5.09E-08
- c Ingested Dose = Concentration \* Exposure Factor
- d The subchronic oral protective body dose is used for children and the chronic value is used for adults.

Hazard Indices (by health effect)	Avg./Max. Exposure (Child)
Reproductive Toxicity effect	1E+00
Other effects	1E-01

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : DRAINAGE POND SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average	Maximum	Adjusted Oral Slope Factor (c)	Average Increased CA Risk	Maximum Increased CA Risk
					Absorbed Dose (b) (mg/kg/day)	Absorbed Dose (b) (mg/kg/day)			
<b>CHILD</b>									
AROC1OR 1242	R2	8.63E+01	1.00E+02	2.14E-08	1.85E-06	2.14E-09	7.70E+06	1E-05	2E-05
<b>ADULT</b>									
AROC1OR 1242	R2	8.63E+01	1.00E+02	2.41E-08	2.08E-06	2.41E-06	7.70E+06	2E-05	2E-05
<b>TOTAL RISK</b>								<b>3E-05</b>	<b>4E-05</b>

- a. Exposure Factor/Child = (876 cm<sup>2</sup> \* 1.0 \* 9.06 \* 26 days/year \* 6 years \* 1E-6 kg/mg)/(15 kg \* 70 years \* 365 days/year) = 2.14E-08  
 Exposure Factor/Adult = (1250 cm<sup>2</sup> \* 1.0 \* 0.06 \* 15 days/year \* 24 years \* 1E-6 kg/mg)/(70 kg \* 70 years \* 365 days/year) = 2.41E-08  
 b. Absorbed Dose = Concentration \* Exposure Factor  
 c. Divided by oral absorption factor of 1.0 for Aroclor 1242

TABLE 1  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : DRAINAGE POND SEDIMENTS  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	Exposure Factor (a)	Average Absorbed Dose (b) (mg/kg/day)	Maximum Absorbed Dose (b) (mg/kg/day)	Adjusted Protective Body Dose (c) (mg/kg/day) <sup>-1</sup>	Average Hazard Quotient	Maximum Hazard Quotient
<b>CHILD</b>								
AROCLOR 1242	8.63E+01	1.00E+02	2.50E-07	2.15E-05	2.50E-05	7.00E-05	3E-01	4E-01
							HAZARD INDEX	4E-01
<b>ADULT</b>								
AROCLOR 1242	8.63E+01	1.00E+02	7.02E-08	6.06E-06	7.02E-06	7.00E-05	9E-02	1E-01
							HAZARD INDEX	1E-01

- a Exposure Factor/Child =  $(876 \text{ cm}^2 * 1.0 * 0.06 * 26 \text{ days/year} * 6 \text{ years} * 1\text{E-}6 \text{ kg/mg}) / (15 \text{ kg} * 6 \text{ years} * 365 \text{ days/year}) = 2.50 \text{ E-}07$   
 Exposure Factor/Adult =  $(2300 \text{ cm}^2 * 1.0 * 0.06 * 13 \text{ days/year} * 24 \text{ years} * 1\text{E-}6 \text{ kg/mg}) / (70 \text{ kg} * 24 \text{ years} * 365 \text{ days/year}) = 7.02 \text{ E-}08$
- b Absorbed Dose = Concentration \* Exposure Factor
- c Multiplied by oral absorption factor of 1.0 for Aroclor 1242  
 The subchronic oral RfD is used for children and the chronic value is used for adults.

TABLE : 33  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SURFACE WATER  
 EXPOSURE TYPE : DERMAL CONTACT/PRESENT/YOUTH TRESPASSER  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average	Maximum	Molecular Weight	Log K <sub>o/w</sub>	Permeability Coefficient (K <sub>p</sub> ) (a) (cm/hr)	Average	Maximum	Exposure Factor (c)	Average	Maximum	Adjusted Slope Factor (e) (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
		Concentration (mg/l)	Concentration (mg/l)				Dose/Event (DAevent) (b) (mg/cm2/event)	Dose/Event (DAevent) (mg/cm2/event)		Dose (d) (mg/kg/day)	Dose (d) (mg/kg/day)			
ACETONE	D	5.83E-03	1.00E-02	58	-0.24	5.70E-04	4.64E-09	7.95E-09	1.84E-01	8.54E-10	1.46E-09			
CARBON DISULFIDE	--	5.75E-03	1.30E-02	80	2.24	2.40E-02	2.12E-07	4.80E-07	1.84E-01	3.91E-08	8.85E-08			
4,4'-DDD	B2	1.30E-05	6.50E-06	320	5.8	2.80E-01	2.82E-08	1.41E-08	1.84E-01	5.19E-09	2.59E-09	2.40E-01	1E-09	4E-11
DIELDRIN	B2	3.50E-05	1.00E-06	381	4.56	1.60E-02	6.65E-09	1.90E-10	1.84E-01	1.22E-09	3.50E-11	1.60E+01	2E-08	4E-10
GAMMA-CHLORDANE	B2	1.80E-05	2.00E-06	410	5.47	4.60E-02	1.21E-08	1.34E-09	1.84E-01	2.22E-09	2.47E-10	1.30E+00	3E-09	2E-10
METHOXYCHLOR	D	1.82E-04	9.00E-06				0.00E+00	0.00E+00	1.84E-01	0.00E+00	0.00E+00			
ALUMINUM	D	8.54E-01	4.49E+00			1.00E-03	8.54E-07	4.49E-06	1.84E-01	1.57E-07	8.27E-07			
ARSENIC	A	3.06E-02	1.16E-01			1.00E-03	3.06E-08	1.16E-07	1.84E-01	5.64E-09	2.14E-08	1.75E+01	1E-07	4E-07
BARIUM	--	2.26E+00	9.17E+00			1.00E-03	2.26E-06	9.17E-06	1.84E-01	4.17E-07	1.69E-06			
CHROMIUM	A	5.47E-03	1.03E-02			1.00E-03	5.47E-09	1.03E-08	1.84E-01	1.01E-09	1.90E-09			
COBALT	--	4.08E-02	1.54E-01			4.00E-04	1.63E-08	6.16E-08	1.84E-01	3.01E-09	1.13E-08			
COPPER	D	6.20E-03	1.75E-02			1.00E-03	6.20E-09	1.75E-08	1.84E-01	1.14E-09	3.22E-09			
CYANIDE	D	9.75E-04	2.70E-03			1.00E-03	9.75E-10	2.70E-09	1.84E-01	1.80E-10	4.97E-10			
LEAD	B2	1.06E-02	3.95E-02			1.00E-03	1.06E-08	3.95E-08	1.84E-01	1.95E-09	7.28E-09			
MANGANESE	D	5.93E+00	2.82E+01			1.00E-03	5.93E-06	2.82E-05	1.84E-01	1.09E-06	5.19E-06			
NICKEL	A	1.10E-02	3.03E-02			1.00E-04	1.11E-09	3.03E-09	1.84E-01	2.04E-10	5.58E-10			
SILVER	D	6.57E-03	3.40E-03			6.00E-04	3.94E-09	2.04E-09	1.84E-01	7.26E-10	3.76E-10			
VANADIUM	D	5.35E-03	1.25E-02			1.00E-03	5.35E-09	1.25E-08	1.84E-01	9.85E-10	2.30E-09			
ZINC	D	2.36E-02	8.19E-02			6.00E-04	1.41E-08	4.91E-08	1.84E-01	2.61E-09	9.05E-09			
TOTAL RISK												1E-07	4E-07	

- a Kp/Organics: All values from EPA guidance except for acetone, which was calculated from the following equation:  $\log K_p = -2.72 + (0.71 * \log K_{o/w}) - (0.0061 * Mol. Wt.)$  (EPA, 1992a)  
 Kp/Inorganics: Default value for untested inorganics assumed to be 0.001 as per EPA guidance (EPA 1992a)  
 b Calculation of DAevent is discussed in Section 3.2.5.2 (Exposure Doses) of this document  
 c Exposure Factor =  $(1810 \text{ cm}^2 * 1 \text{ ev/day} * 13 \text{ days/yr} * 10 \text{ yrs}) / (50 \text{ kg} * 365 \text{ days/yr} * 70 \text{ yrs}) = 1.84 \text{ E-01}$   
 d Dermal Absorbed Dose = DAevent \* Exposure Factor  
 e Divided by following oral absorption factors: 1.00 for organics, 0.10 for inorganics

TA : 34  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SURFACE WATER  
 EXPOSURE TYPE : DERMAL CONTACT/PRESENT/YOUTH TRESPASSER  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/l)	Maximum Concentration (mg/l)	Molecular Weight	Log Ko/w	Permeability Coefficient (Kp) (a) (cm/hr)	Average Absorbed Dose/Event (DAevent) (b) (mg/cm2/event)	Maximum Absorbed Dose/Event (DAevent) (mg/cm2/event)	Exposure Factor (c)	Average Dermal Absorbed Dose (d) (mg/kg/day)	Maximum Dermal Absorbed Dose (mg/kg/day)	Adjusted Chronic Protective Body Dose (e) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
ACETONE	5.83E-03	1.00E-02	58	-0.24	5.70E-04	4.64E-09	7.95E-09	1.29E+00	5.98E-09	1.03E-08	1.00E-01	6E-08	1E-07
CARBON DISULFIDE	5.75E-03	1.30E-02	80	2.24	2.40E-02	2.12E-07	4.80E-07	1.29E+00	2.74E-07	6.19E-07	1.00E-01	3E-06	6E-06
4,4'- DDD	1.30E-05	6.50E-06	320	5.8	2.80E-01	2.82E-08	1.41E-08	1.29E+00	3.63E-08	1.82E-08	3.00E-03	1E-05	6E-06
DIELDRIN	3.50E-05	1.00E-06	381	4.56	1.60E-02	6.65E-09	1.90E-10	1.29E+00	8.57E-09	2.45E-10	5.00E-05	2E-04	5E-06
GAMMA-CHLORDANI	1.80E-05	2.00E-06	410	5.47	4.60E-02	1.21E-08	1.34E-09	1.29E+00	1.55E-08	1.73E-09	6.00E-05	3E-04	3E-05
METHOXYCHLOR	1.82E-04	9.00E-06						1.29E+00			5.00E-03		
ALUMINUM	8.54E-01	4.49E+00			1.00E-03	8.54E-07	4.49E-06	1.29E+00	1.10E-06	5.79E-06			
ARSENIC	3.06E-02	1.16E-01			1.00E-03	3.06E-08	1.16E-07	1.29E+00	3.95E-08	1.50E-07	3.00E-05	1E-03	5E-03
BARIUM	2.26E+00	9.17E+00			1.00E-03	2.26E-06	9.17E-06	1.29E+00	2.92E-06	1.18E-05	7.00E-03	4E-04	2E-03
CHROMIUM	5.47E-03	1.03E-02			1.00E-03	5.47E-09	1.03E-08	1.29E+00	7.05E-09	1.33E-08	5.00E-04	1E-05	3E-05
COBALT	4.08E-02	1.54E-01			4.00E-04	1.63E-08	6.16E-08	1.29E+00	2.11E-08	7.94E-08			
COPPER	6.20E-03	1.75E-02			1.00E-03	6.20E-09	1.75E-08	1.29E+00	7.99E-09	2.26E-08			
CYANIDE	9.75E-04	2.70E-03			1.00E-03	9.75E-10	2.70E-09	1.29E+00	1.26E-09	3.48E-09	2.00E-03	6E-07	2E-06
LEAD	1.06E-02	3.95E-02			1.00E-03	1.06E-08	3.95E-08	1.29E+00	1.36E-08	5.09E-08			
MANGANESE	5.93E+00	2.82E+01			1.00E-03	5.93E-06	2.82E-05	1.29E+00	7.65E-06	3.64E-05	5.00E-04	2E-02	7E-02
NICKEL	1.11E-02	3.03E-02			1.00E-04	1.11E-09	3.03E-09	1.29E+00	1.42E-09	3.91E-09	2.00E-03	7E-07	2E-06
SILVER	6.57E-03	3.40E-03			6.00E-04	3.94E-09	2.04E-09	1.29E+00	5.08E-09	2.63E-09	5.00E-04	1E-05	5E-06
VANADIUM	5.35E-03	1.25E-02			1.00E-03	5.35E-09	1.25E-08	1.29E+00	6.90E-09	1.61E-08	7.00E-04	1E-05	2E-05
ZINC	2.36E-02	8.19E-02			6.00E-04	1.41E-08	4.91E-08	1.29E+00	1.82E-08	6.34E-08	3.00E-02	6E-07	2E-06

HAZARD INDEX 2E-02 8E-02

- a Kp/Organics: All values from EPA guidance except for acetone, which was calculated from the following equation:  $\log Kp = -2.72 + (0.71 * \log Ko/w) - (0.0061 * Mol. Wt.)$  (EPA, 1992a)  
 Kp/Inorganics: Default value for untested inorganics assumed to be 0.001 as per EPA guidance (EPA 1992a)  
 b Calculation of DAevent is discussed in Section 3.2.5.2 (Exposure Doses) of this document  
 c Exposure Factor =  $(1810 \text{ cm}^2 * 1 \text{ ev/day} * 13 \text{ days/yr} * 10 \text{ yrs}) / (50 \text{ kg} * 365 \text{ days/yr} * 10 \text{ yrs}) = 1.29$   
 d Dermal Absorbed Dose = DAevent \* Exposure Factor  
 e Multiplied by following oral absorption factors: 1.00 for organics, 0.10 for inorganics

TABLE : 35  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SURFACE WATER  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/l)	Maximum Concentration (mg/l)	Molecular Weight	Log K <sub>ow</sub>	Permeability Coefficient (K <sub>p</sub> ) (a) (cm/hr)	Average	Maximum	Exposure Factor (c)	Average	Maximum	Adjusted Slope Factor (e)	Average	Maximum
							Dose/Event (DAevent) (b) (mg/cm <sup>2</sup> /event)	Absorbed Dose/Event (DAevent) (mg/cm <sup>2</sup> /event)		Dermally Absorbed Dose (d) (mg/kg/day)	Dermally Absorbed Dose (mg/kg/day)		Increased CA Risk	Increased CA Risk
<b>CHILD</b>														
ACETONE	D	5.83E-03	1.00E-02	58	-0.24	5.70E-04	4.64E-09	7.95E-09	3.57E-01	1.65E-09	2.83E-09			
CARBON DISULFIDE	--	5.75E-03	1.30E-02	80	2.24	2.40E-02	2.12E-07	4.80E-07	3.57E-01	7.58E-08	1.71E-07			
4,4'-DDD	B2	1.30E-05	6.50E-06	320	5.8	2.80E-01	2.82E-08	1.41E-08	3.57E-01	1.00E-08	5.02E-09	2.40E-01	2E-09	1E-09
DIELDRIN	B2	3.50E-05	1.00E-06	381	4.56	1.60E-02	6.65E-09	1.90E-10	3.57E-01	2.37E-09	6.77E-11	1.60E+01	4E-08	1E-09
GAMMA-CHLORDANE	B2	1.80E-05	2.00E-06	410	5.47	4.60E-02	1.21E-08	1.34E-09	3.57E-01	4.30E-09	4.78E-10	1.30E+00	6E-09	6E-10
METHOXYCHLOR	D	1.82E-04	9.00E-06						3.57E-01					
ALUMINUM	D	8.54E-01	4.49E+00			1.00E-03	8.54E-07	4.49E-06	3.57E-01	3.04E-07	1.60E-06			
ARSENIC	A	3.06E-02	1.16E-01			1.00E-03	3.06E-08	1.16E-07	3.57E-01	1.09E-08	4.15E-08	1.75E+01	2E-07	7E-07
BARIUM	--	2.26E+00	9.17E+00			1.00E-03	2.26E-06	9.17E-06	3.57E-01	8.07E-07	3.27E-06			
CHROMIUM	A	5.47E-03	1.03E-02			1.00E-03	5.47E-09	1.03E-08	3.57E-01	1.95E-09	3.67E-09			
COBALT	--	4.08E-02	1.54E-01			4.00E-04	1.63E-08	6.16E-08	3.57E-01	5.82E-09	2.20E-08			
COPPER	D	6.20E-03	1.75E-02			1.00E-03	6.20E-09	1.75E-08	3.57E-01	2.21E-09	6.24E-09			
CYANIDE	D	9.75E-04	2.70E-03			1.00E-03	9.75E-10	2.70E-09	3.57E-01	3.48E-10	9.63E-10			
LEAD	B2	1.06E-02	3.95E-02			1.00E-03	1.06E-08	3.95E-08	3.57E-01	3.77E-09	1.41E-08			
MANGANESE	D	5.93E+00	2.82E+01			1.00E-03	5.93E-06	2.82E-05	3.57E-01	2.11E-06	1.01E-05			
NICKEL	A	1.10E-02	3.03E-02			1.00E-04	1.11E-09	3.03E-09	3.57E-01	3.94E-10	1.08E-09			
SILVER	D	6.57E-03	3.40E-03			6.00E-04	3.94E-09	2.04E-09	3.57E-01	1.40E-09	7.27E-10			
VANADIUM	D	5.35E-03	1.25E-02			1.00E-03	5.35E-09	1.25E-08	3.57E-01	1.91E-09	4.46E-09			
ZINC	D	2.36E-02	8.19E-02			6.00E-04	1.41E-08	4.91E-08	3.57E-01	5.05E-09	1.75E-08			
<b>ADULT</b>														
ACETONE	D	5.83E-03	1.00E-02	58	-0.24	5.70E-04	4.64E-09	7.95E-09	4.01E-01	1.86E-09	3.19E-09			
CARBON DISULFIDE	--	5.75E-03	1.30E-02	80	2.24	2.40E-02	2.12E-07	4.80E-07	4.01E-01	8.52E-08	1.93E-07			
4,4'-DDD	B2	1.30E-05	6.50E-06	320	5.8	2.80E-01	2.82E-08	1.41E-08	4.01E-01	1.13E-08	5.65E-09	2.40E+01	3E-09	1E-09
DIELDRIN	B2	3.50E-05	1.00E-06	381	4.56	1.60E-02	6.65E-09	1.90E-10	4.01E-01	2.67E-09	7.62E-11	1.60E+01	4E-08	1E-09
GAMMA-CHLORDANE	B2	1.80E-05	2.00E-06	410	5.47	4.60E-02	1.21E-08	1.34E-09	4.01E-01	4.84E-09	5.37E-10	1.30E+00	6E-09	7E-10
METHOXYCHLOR	D	1.82E-04	9.00E-06						4.01E-01					
ALUMINUM	D	8.54E-01	4.49E+00			1.00E-03	8.54E-07	4.49E-06	4.01E-01	3.43E-07	1.80E-06			
ARSENIC	A	3.06E-02	1.16E-01			1.00E-03	3.06E-08	1.16E-07	4.01E-01	1.23E-08	4.67E-08	1.75E+01	1E-07	8E-07
BARIUM	--	2.26E+00	9.17E+00			1.00E-03	2.26E-06	9.17E-06	4.01E-01	9.08E-07	3.68E-06			
CHROMIUM	A	5.47E-03	1.03E-02			1.00E-03	5.47E-09	1.03E-08	4.01E-01	2.19E-09	4.13E-09			
COBALT	--	4.08E-02	1.54E-01			4.00E-04	1.63E-08	6.16E-08	4.01E-01	6.55E-09	2.47E-08			
COPPER	D	6.20E-03	1.75E-02			1.00E-03	6.20E-09	1.75E-08	4.01E-01	2.49E-09	7.02E-09			
CYANIDE	D	9.75E-04	2.70E-03			1.00E-03	9.75E-10	2.70E-09	4.01E-01	3.91E-10	1.08E-09			
LEAD	B2	1.06E-02	3.95E-02			1.00E-03	1.06E-08	3.95E-08	4.01E-01	4.25E-09	1.58E-08			
MANGANESE	D	5.93E+00	2.82E+01			1.00E-03	5.93E-06	2.82E-05	4.01E-01	2.38E-06	1.13E-05			
NICKEL	A	1.10E-02	3.03E-02			1.00E-04	1.11E-09	3.03E-09	4.01E-01	4.43E-10	1.22E-09			
SILVER	D	6.57E-03	3.40E-03			6.00E-04	3.94E-09	2.04E-09	4.01E-01	1.58E-09	8.13E-10			
VANADIUM	D	5.35E-03	1.25E-02			1.00E-03	5.35E-09	1.25E-08	4.01E-01	2.15E-09	5.02E-09			
ZINC	D	2.36E-02	8.19E-02			6.00E-04	1.41E-08	4.91E-08	4.01E-01	5.68E-09	1.97E-08			

TOTAL RISK 5E-07 2E-06

- a K<sub>p</sub>/Organics: All values from EPA guidance except for acetone, which was calculated from the following equation:  $\log K_p = -2.72 + (0.71 \cdot \log K_{ow}) - (0.0061 \cdot \text{Mol. Wt.})$  (EPA, 1992a)  
 K<sub>p</sub>/Inorganics: Default value for untested inorganics assumed to be 0.001 as per EPA guidance (EPA 1992a)  
 b Calculation of DAevent is discussed in Section 3.2.5.2 (Exposure Doses) of this document  
 c Exposure Factor/Child = (876 cm<sup>2</sup> \* 1 ev/day \* 26 days/yr \* 6 yrs)/(15 kg \* 365 days/yr \* 70 yrs) = 3.57 E-01  
 Exposure Factor/Adult = (2300 cm<sup>2</sup> \* 1 ev/day \* 13 days/yr \* 24 yrs)/(70 kg \* 365 days/yr \* 70 yrs) = 4.01 E-01  
 d Dermally Absorbed Dose = DAevent \* Exposure Factor  
 e Divided by following oral absorption factors: 1.00 for organics, 0.10 for inorganics

36  
 : BENNINGTON LANDFILL  
 ENV. MEDIUM : POND AND BROOK SURFACE WATER  
 EXPOSURE TYPE : DERMAL CONTACT/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

Contaminant of Concern	Average Concentration (mg/l)	Maximum Concentration (mg/l)	Molecular Weight	Log Ko/w	Permeability Coefficient (Kp) (a) (cm/hr)	Average Absorbed Dose/Event (DAevent) (b) (mg/cm2/event)	Maximum Absorbed Dose/Event (DAevent) (mg/cm2/event)	Exposure Factor (c)	Average Dose (d) (mg/kg/day)	Maximum Dose (mg/kg/day)	Adjusted Chronic Protective Body Dose (e) (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
<b>CHILD</b>													
ACETONE	5.83E-03	1.00E-02	58	-0.24	5.70E-04	4.64E-09	7.95E-09	4.16E+00	1.93E-08	3.31E-08	1.00E+00	2E-08	3E-08
CARBON DISULFIDE	5.75E-03	1.30E-02	80	2.24	2.40E-02	2.12E-07	4.80E-07	4.16E+00	8.84E-07	2.00E-06	1.00E-01	9E-06	2E-05
4,4'-DDD	1.30E-05	6.50E-06	320	5.8	2.80E-01	2.82E-08	1.41E-08	4.16E+00	1.17E-07	5.86E-08	3.00E-03	4E-05	2E-05
DIELDRIN	3.50E-05	1.00E-06	381	4.56	1.60E-02	6.65E-09	1.90E-10	4.16E+00	2.77E-08	7.90E-10	5.00E-05	6E-04	2E-05
GAMMA-CHLORDANE	1.80E-05	2.00E-06	410	5.47	4.60E-02	1.21E-08	1.34E-09	4.16E+00	5.01E-08	5.57E-09	6.00E-05	8E-04	9E-05
METHOXYCHLOR	1.82E-04	9.00E-06						4.16E+00			5.00E-03		
ALUMINUM	8.54E-01	4.49E+00			1.00E-03	8.54E-07	4.49E-06	4.16E+00	3.55E-06	1.87E-05			
ARSENIC	3.06E-02	1.16E-01			1.00E-03	3.06E-08	1.16E-07	4.16E+00	1.27E-07	4.84E-07	3.00E-05	4E-03	2E-02
BARIUM	2.26E+00	9.17E+00			1.00E-03	2.26E-06	9.17E-06	4.16E+00	9.41E-06	3.81E-05	7.00E-03	1E-03	5E-03
CHROMIUM	5.47E-03	1.03E-02			1.00E-03	5.47E-09	1.03E-08	4.16E+00	2.27E-08	4.28E-08	2.00E-03	1E-05	2E-05
COBALT	4.08E-02	1.54E-01			4.00E-04	1.63E-08	6.16E-08	4.16E+00	6.79E-08	2.56E-07			
COPPER	6.20E-03	1.75E-02			1.00E-03	6.20E-09	1.75E-08	4.16E+00	2.58E-08	7.28E-08			
CYANIDE	9.75E-04	2.70E-03			1.00E-03	9.75E-10	2.70E-09	4.16E+00	4.06E-09	1.12E-08	2.00E-03	2E-06	6E-06
LEAD	1.06E-02	3.95E-02			1.00E-03	1.06E-08	3.95E-08	4.16E+00	4.40E-08	1.64E-07			
MANGANESE	5.93E+00	2.82E+01			1.00E-03	5.93E-06	2.82E-05	4.16E+00	2.47E-05	1.17E-04	5.00E-04	5E-02	2E-01
NICKEL	1.11E-02	3.03E-02			1.00E-04	1.11E-09	3.03E-09	4.16E+00	4.60E-09	1.26E-08	2.00E-03	2E-06	6E-06
SILVER	6.57E-03	3.40E-03			6.00E-04	3.94E-09	2.04E-09	4.16E+00	1.64E-08	8.49E-09	5.00E-04	3E-05	2E-05
VANADIUM	5.35E-03	1.25E-02			1.00E-03	5.35E-09	1.25E-08	4.16E+00	2.23E-08	5.20E-08	7.00E-04	3E-05	7E-05
ZINC	2.36E-02	8.19E-02			6.00E-04	1.41E-08	4.91E-08	4.16E+00	5.89E-08	2.04E-07	3.00E-02	2E-06	7E-06
											HAZARD INDEX	6E-02	3E-01
<b>ADULT</b>													
ACETONE	5.83E-03	1.00E-02	58	-0.24	5.70E-04	4.64E-09	7.95E-09	1.17E+00	5.43E-09	9.30E-09	1.00E-01	5E-08	9E-08
CARBON DISULFIDE	5.75E-03	1.30E-02	80	2.24	2.40E-02	2.12E-07	4.80E-07	1.17E+00	2.49E-07	5.62E-07	1.00E-01	2E-06	6E-06
4,4'-DDD	1.30E-05	6.50E-06	320	5.8	2.80E-01	2.82E-08	1.41E-08	1.17E+00	3.30E-08	1.65E-08	3.00E-03	1E-05	5E-06
DIELDRIN	3.50E-05	1.00E-06	381	4.56	1.60E-02	6.65E-09	1.90E-10	1.17E+00	7.78E-09	2.22E-10	5.00E-05	2E-04	4E-06
GAMMA-CHLORDANE	1.80E-05	2.00E-06	410	5.47	4.60E-02	1.21E-08	1.34E-09	1.17E+00	1.41E-08	1.57E-09	6.00E-05	2E-04	3E-05
METHOXYCHLOR	1.82E-04	9.00E-06						1.17E+00			5.00E-03		
ALUMINUM	8.54E-01	4.49E+00			1.00E-03	8.54E-07	4.49E-06	1.17E+00	9.99E-07	5.25E-06			
ARSENIC	3.06E-02	1.16E-01			1.00E-03	3.06E-08	1.16E-07	1.17E+00	3.58E-08	1.36E-07	3.00E-05	1E-03	5E-03
BARIUM	2.26E+00	9.17E+00			1.00E-03	2.26E-06	9.17E-06	1.17E+00	2.65E-06	1.07E-05	7.00E-03	4E-04	2E-03
CHROMIUM	5.47E-03	1.03E-02			1.00E-03	5.47E-09	1.03E-08	1.17E+00	6.40E-09	1.21E-08	5.00E-04	1E-05	2E-05
COBALT	4.08E-02	1.54E-01			4.00E-04	1.63E-08	6.16E-08	1.17E+00	1.91E-08	7.21E-08			
COPPER	6.20E-03	1.75E-02			1.00E-03	6.20E-09	1.75E-08	1.17E+00	7.26E-09	2.05E-08			
CYANIDE	9.75E-04	2.70E-03			1.00E-03	9.75E-10	2.70E-09	1.17E+00	1.14E-09	3.16E-09	2.00E-03	6E-07	2E-06
LEAD	1.06E-02	3.95E-02			1.00E-03	1.06E-08	3.95E-08	1.17E+00	1.24E-08	4.62E-08			
MANGANESE	5.93E+00	2.82E+01			1.00E-03	5.93E-06	2.82E-05	1.17E+00	6.94E-06	3.30E-05	5.00E-04	1E-02	7E-02
NICKEL	1.11E-02	3.03E-02			1.00E-04	1.11E-09	3.03E-09	1.17E+00	1.29E-09	3.55E-09	2.00E-03	6E-07	2E-06
SILVER	6.57E-03	3.40E-03			6.00E-04	3.94E-09	2.04E-09	1.17E+00	4.61E-09	2.39E-09	5.00E-04	9E-06	5E-06
VANADIUM	5.35E-03	1.25E-02			1.00E-03	5.35E-09	1.25E-08	1.17E+00	6.26E-09	1.46E-08	7.00E-04	9E-06	2E-05
ZINC	2.36E-02	8.19E-02			6.00E-04	1.41E-08	4.91E-08	1.17E+00	1.66E-08	5.75E-08	3.00E-02	6E-07	2E-06
											HAZARD INDEX	2E-02	7E-02

- a Kp/Organics: All values from EPA guidance except for acetone, which was calculated from the following equation:  $\log Kp = -2.72 + (0.71 * \log Ko/w) - (0.0061 * Mol. Wt.)$  (EPA, 1992a)  
 Kp/Inorganics: Default value for untested inorganics assumed to be 0.001 as per EPA guidance (EPA 1992a)  
 b Calculation of DAevent is discussed in Section 3.2.5.2 (Exposure Doses) of this document  
 c Exposure Factor/Child =  $(876 \text{ cm}^2 * 1 \text{ ev/day} * 26 \text{ days/yr} * 6 \text{ yrs}) / (15 \text{ kg} * 365 \text{ days/yr} * 6 \text{ yrs}) = 4.16$   
 Exposure Factor/Adult =  $(2300 \text{ cm}^2 * 1 \text{ ev/day} * 13 \text{ days/yr} * 24 \text{ yrs}) / (70 \text{ kg} * 365 \text{ days/yr} * 24 \text{ yrs}) = 1.17$   
 d Dermally Absorbed Dose = DAevent \* Exposure Factor  
 e Multiplied by following oral absorption factors: 1.00 for organics, 0.10 for inorganics. Subchronic protective body doses were used for children and chronic values were used for adults.

151  
 152  
 ENV. MEDIUM  
 EXPOSURE TYPE  
 RISK TYPE

153  
 HUNTINGTON CANONVILLE  
 AMBIENT AIR AT TRANSFER STATION  
 INHALATION TRI-SENT/SITE EMPLOYEE  
 CARCINOGENIC

Contaminant of Concern	EPA Weight of Evidence Classification	Average Concentration (mg/m <sup>3</sup> )	Maximum Concentration (mg/m <sup>3</sup> )	Exposure Factor (a)	Average	Maximum	Inhalation Slope Factor (mg/kg/day) <sup>1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
					Inhaled Dose (b) (mg/kg/day)	Inhaled Dose (b) (mg/kg/day)			
1,1,1-TRICHLOROETHANE	D	7.47E-04	2.04E-03	1.68E-02	1.25E-05	3.42E-05			
1,1,1,2-TETRACHLOROETHANE	C	2.23E-04	1.00E-04	1.68E-02	3.74E-06	1.68E-06			
BENZENE	B2	6.10E-04	1.63E-03	1.68E-02	1.02E-05	2.74E-05	1.99E-04	3E-07	8E-07
1,2-DIHYDROBENZENE	D	2.32E-04	3.09E-04	1.68E-02	3.89E-06	5.18E-06			
XYLENE	1c	6.29E-04	1.41E-03	1.68E-02	1.06E-05	2.36E-05			
AKOFLOR 1242	B2	4.00E-06	6.66E-06	1.68E-02	6.71E-08	1.11E-07			
<b>TOTAL RISK</b>								<b>3E-07</b>	<b>8E-07</b>

a Exposure Factor = (20 m<sup>3</sup>/day \* 60 days/year \* 25 years (170 hr) \* 70 years \* 365 days/year) = 1.68E-02  
 b Inhaled Dose = Concentration \* Exposure Factor

TABLE 1  
 SITE: BENNINGTON LANDFILL  
 ENV. MEDIUM: AMBIENT AIR AT TRANSFER STATION  
 EXPOSURE TYPE: INHALATION/PRESENT/SITE EMPLOYEE  
 RISK TYPE: NON-CARCINOGENIC

Contaminant of Concern	Average Concentration (mg/m <sup>3</sup> )	Maximum Concentration (mg/m <sup>3</sup> )	Exposure Factor (a)	Average Inhaled Dose (b) (mg/kg/day)	Maximum Inhaled Dose (b) (mg/kg/day)	Chronic Inhalation Protective Body Dose (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
1,1,1-TRICHLOROETHANE	7.47E-04	2.04E-03	4.70E-02	3.51E-05	9.57E-05			
1,1-DICHLOROETHANE	2.23E-04	1.00E-04	4.70E-02	1.05E-05	4.70E-06	1.00E-01	1E-04	9E-05
BENZENE	6.10E-04	1.63E-03	4.70E-02	2.86E-05	7.66E-05			
ETHYLBENZENE	2.32E-04	3.09E-04	4.70E-02	1.09E-05	1.45E-05	2.86E-01	4E-05	5E-05
XYLENE	6.29E-04	1.41E-03	4.70E-02	2.95E-05	6.61E-05			
AROCLOK 1242	4.00E-06	6.00E-06	4.70E-02	1.88E-07	2.82E-07			
HAZARD INDEX							1E-04	9E-04

a Exposure Factor = (20 m<sup>3</sup>/day \* 60 days/year \* 25 years)/(70 kg \* 25 years \* 365 days/year) = 4.70 E-02  
 b Inhaled Dose = Concentration \* Exposure Factor

TABLE 4-10. SEDIMENT ECOLOGICAL RISK SUMMARY.

CONTAMINANT OF CONCERN	SEDIMENT CONCENTRATIONS (mg/kg)		MOE SEDIMENT GUIDELINES <sup>1</sup> (mg/kg)		LEL-BASED HAZARD QUOTIENTS <sup>2</sup>		SEL-BASED HAZARD QUOTIENTS <sup>2</sup>	
	MEAN	MAX.	LEL	SEL	MEAN	MAX.	MEAN	MAX.
<b>Diversion Ditch</b>								
Copper	2.01E+01	3.35E+01	1.60E+01	1.10E+02	1E+00	2E+00	2E-01	3E-01
Cyanide	1.10E-01	1.40E-01	1.00E-01	-	1E+00	1E+00	-	-
Lead	1.60E+01	3.42E+01	3.10E+01	2.50E+02	5E-01	1E+00	6E-02	1E-01
Mercury	2.40E-01	3.90E-01	2.00E-01	2.00E+00	1E+00	2E+00	1E-01	2E-01
Silver	3.42E+00	7.40E+00	1.00E+00	2.20E+00	3E+00	7E+00	2E+00	3E+00
HAZARD INDEX					7E+00	1.4E+01	2E+00	4E+00
<b>Ponds B and C/Hewitt Brook</b>								
Acetone	3.45E-01	2.00E+00	8.05E-01	8.05E+00	4E-01	2E+00	4E-02	2E-01
Alpha-Chlordane	2.52E-03	1.10E-02	7.00E-03	6.00E-02	4E-01	2E+00	4E-02	2E-01
Endosulfan II	7.30E-04	7.30E-04	3.80E-04	1.50E-03	2E+00	2E+00	5E-01	5E-01
Antimony	3.17E+00	9.40E+00	2.00E+00	2.50E+01	2E+00	5E+00	1E-01	4E-01
Arsenic	1.86E+01	6.42E+01	6.00E+00	3.30E+01	3E+00	1.1E+01	6E-01	2E+00
Barium	8.80E+02	4.17E+03	-	-	-	-	-	-
Cobalt	3.32E+01	1.21E+02	5.00E+01	-	7E-01	2E+00	-	-
Copper	1.31E+01	2.61E+01	1.60E+01	1.10E+02	8E-01	2E+00	1E-01	2E-01
Cyanide	2.50E-01	1.00E+00	1.00E-01	-	2E+00	1.0E+01	-	-
Iron	3.98E+04	1.82E+05	2.00E+04	4.00E+04	2E+00	9E+00	1E+00	5E+00
Lead	1.32E+01	5.53E+01	3.10E+01	2.50E+02	4E-01	2E+00	5E-02	2E-01
Manganese	3.04E+03	1.33E+04	4.60E+02	1.10E+03	7E+00	2.9E+01	3E+00	1.2E+01
Nickel	1.03E+01	2.19E+01	1.60E+01	7.50E+01	6E-01	1E+00	1E-01	3E-01
Selenium	1.19E+00	4.80E+00	-	-	-	-	-	-
Silver	5.70E-01	1.60E+00	1.00E+00	2.20E+00	6E-01	2E+00	3E-01	7E-01
HAZARD INDEX					2.2E+01	7.8E+01	6E+00	2.1E+01
<b>Drainage Pond</b>								
N-Nitrosodi-n-propylamine	3.04E-01	3.10E-01	-	-	-	-	-	-
4,4-DDE	8.55E-02	9.30E-02	5.00E-03	3.23E-01	1.7E+01	1.9E+01	3E-01	3E-01
Aroclor 1242	8.63E+01	1.00E+02	3.00E-02	2.55E+00	2.9E+03	3.3E+03	3.4E+01	3.9E+01
Arsenic	2.02E+01	2.75E+01	6.00E+00	3.30E+01	3E+00	5E+00	6E-01	8E-01
Barium	5.08E+02	5.08E+02	-	-	-	-	-	-
Beryllium	3.18E-01	3.95E-01	-	-	-	-	-	-
Copper	3.25E+01	3.27E+01	1.60E+01	1.10E+02	2E+00	2E+00	3E-01	3E-01
Cyanide	3.05E-01	4.10E-01	1.00E-01	-	3E+00	4E+00	-	-
Iron	3.69E+04	4.75E+04	2.00E+04	4.00E+04	2E+00	2E+00	9E-01	1E+00
Lead	1.44E+02	1.69E+02	3.10E+01	2.50E+02	5E+00	5E+00	6E-01	7E-01
Manganese	5.72E+02	8.07E+02	4.60E+02	1.10E+03	1E+00	2E+00	5E-01	7E-01
Mercury	2.35E-01	2.40E-01	2.00E-01	2.00E+00	1E+00	1E+00	1E-01	1E-01
Nickel	1.46E+01	1.69E+01	1.60E+01	7.50E+01	9E-01	1E+00	2E-01	2E-01
Zinc	2.17E+02	2.21E+02	1.20E+02	8.20E+02	2E+00	2E+00	3E-01	3E-01
HAZARD INDEX					2.9E+03	3.4E+03	3.8E+01	4.4E+01

- No data available

Note: Shading indicates a hazard quotient of one or greater.

<sup>1</sup> Sediment Guidelines from Table 4-7.

<sup>2</sup> Hazard Quotients = Contaminant Sediment Concentration (mean or maximum) divided by Sediment Guidelines.

TABLE 4-9. SURFACE WATER ECOLOGICAL RISK SUMMARY, BENNINGTON LANDFILL.

CONTAMINANT OF CONCERN	SURFACE WATER CONCENTRATION (ug/l)		WATER QUALITY VALUE <sup>1</sup> (ug/l)		HAZARD QUOTIENTS <sup>2</sup> FOR ACUTE CRITERIA		HAZARD QUOTIENTS <sup>2</sup> FOR CHRONIC CRITERIA	
	MEAN	MAXIMUM	ACUTE	CHRONIC	MEAN	MAXIMUM	MEAN	MAXIMUM
<b>Ponds B and C/Hewitt Brook</b>								
Aluminum	8.54E+02	4.49E+03	7.50E+02	8.70E+01	1E+00	6E+00	1E+01	5.2E+01
Barium	2.26E+03	9.17E+03	1.45E+04	5.80E+03	2E-01	6E-01	4E-01	2E+00
Calcium	1.09E+05	1.78E+05	1.39E+05	1.16E+05	8E-01	1E+00	9E-01	2E+00
Cobalt	4.08E+01	1.54E+02	4.86E+02	1.00E+01	8E-02	3E-01	4E+00	1.5E+01
Iron	7.93E+04	3.89E+05	2.88E+03	1.00E+03	2.8E+01	1.3E+02	7.9E+01	3.9E+02
Lead	1.06E+01	3.95E+01	3.72E+02	1.45E+01	3E-02	1E-01	7E-01	3E+00
Manganese	5.93E+03	2.82E+04	9.80E+03	4.10E+03	6E-01	3E+00	1E+00	7E+00
Silver	3.40E+00	3.40E+00	3.15E+01	1.20E-01	1E-01	1E-01	2.8E+01	2.8E+01
HAZARD INDEX					3.0E+01	1.5E+02	1.3E+02	5.0E+02

Note: Shading indicates a hazard quotient of one or greater.

<sup>1</sup> Water Quality Criteria/Effects Concentrations from Table 4-6.

<sup>2</sup> Hazard Quotient = COC concentration (mean or maximum) divided by water quality value (acute or chronic).

TABLE E-1. PLANT CONCENTRATIONS OF COCS, FIELD HABITAT.

Contaminant of Concern	Soil Concentration		Log Kow <sup>1</sup>	Plant Uptake Factor <sup>2</sup>	Plant Concentration <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)
Acetone	1.03E-02	2.70E-02	0.24	1.47E-01	1.51E-04	3.97E-04
Xylene (Total)	7.80E-03	1.40E-02	3.26	3.19E-01	2.49E-04	4.47E-04
Bis(2-ethylhexyl)phthalate	3.71E-01	1.10E+00	9.61	9.59E-12	3.56E-13	1.05E-12
Butylbenzylphthalate	2.73E-01	5.40E-01	4.78	1.96E-02	5.35E-04	1.06E-03
Di-n-butylphthalate	4.90E-02	4.90E-02	5.60	1.98E-03	9.70E-06	9.70E-06
Benzo(a)anthracene	4.40E-02	4.40E-02	5.60	1.98E-03	8.71E-06	8.71E-06
Fluoranthene	1.20E-01	1.20E-01	4.90	1.45E-02	1.74E-04	1.74E-04
Phenanthrene	7.30E-02	7.30E-02	4.46	4.13E-02	3.01E-04	3.01E-04
Pyrene	2.37E-01	5.00E-01	4.88	1.53E-02	3.63E-04	7.65E-04
Aldrin	9.70E-04	1.90E-03	6.50	8.49E-05	8.24E-09	1.61E-08
Gamma-chlordane	1.40E-03	2.40E-03	3.32	2.97E-01	4.16E-05	7.13E-05
4,4-DDD	1.70E-04	1.70E-04	6.00	5.30E-04	9.01E-09	9.01E-09
4,4-DDE	1.64E-03	3.90E-03	5.70	1.44E-03	2.36E-07	5.62E-07
4,4-DDT	2.01E-03	6.80E-03	6.40	1.24E-04	2.50E-08	8.47E-08
Dieldrin	1.86E-03	2.70E-03	4.32	5.57E-02	1.04E-05	1.50E-05
Endosulfan I	2.34E-03	8.90E-03	3.83	1.40E-01	3.28E-05	1.25E-04
Endosulfan II	1.57E-03	3.90E-03	3.83	1.40E-01	2.20E-05	5.46E-05
Endrin	6.10E-05	6.10E-05	4.56	3.30E-02	2.01E-07	2.01E-07
Endrin Ketone	4.92E-03	9.50E-03	4.56	3.30E-02	1.62E-05	3.14E-05
Heptachlor epoxide	1.42E-03	2.40E-03	5.40	3.65E-03	5.18E-07	8.76E-07
Methoxychlor	8.98E-03	1.40E-02	4.80	1.87E-02	1.68E-05	2.62E-05
Aroclor-1016	1.08E+00	6.40E+00	6.04	4.62E-04	4.98E-05	2.95E-04
Aroclor-1248	1.35E+00	1.10E+01	6.04	4.62E-04	6.22E-05	5.08E-04
Beryllium	2.70E-01	7.40E-01	NA	1.00E-02	2.70E-04	7.40E-04
Cadmium	7.80E-01	1.40E+00	NA	5.50E-01	4.29E-02	7.70E-02
Cobalt	1.92E+01	6.28E+01	NA	2.00E-02	3.84E-02	1.26E-01
Copper	2.75E+01	5.34E+01	NA	4.00E-01	1.10E+00	2.14E+00
Iron	2.27E+04	3.96E+04	NA	4.00E-03	9.09E+00	1.58E+01
Lead	2.14E+01	5.21E+01	NA	4.50E-02	9.62E-02	2.34E-01
Nickel	1.37E+01	2.08E+01	NA	6.00E-02	8.22E-02	1.25E-01
Thallium	4.40E-01	7.50E-01	NA	4.00E-03	1.76E-04	3.00E-04
Zinc	5.94E+01	8.41E+01	NA	1.50E+00	8.91E+00	1.26E+01

NA: Not Applicable

<sup>1</sup> from Superfund Public Health Evaluation Manual (SPHEM), 1986 or Howard, 1991.

<sup>2</sup> Organics from Briggs et al. (1982), Inorganics from Baes et al. (1984).

<sup>3</sup> Plant concentration = Soil concentration x Plant uptake factor.

Note: Plant concentration converted from dry weight to wet weight by multiplying by 0.1 (Baes et al., 1984)

TABLE E-2. PLANT CONCENTRATIONS OF COCS, WOODED HABITAT.

Contaminant of Concern	Soil Concentration			Plant Uptake Factor <sup>2</sup>	Plant Concentration <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Log Kow <sup>1</sup>		Mean (mg/kg)	Maximum (mg/kg)
Toluene	6.90E-03	9.00E-03	2.73	5.42E-01	3.74E-04	4.88E-04
Bis(2-ethylhexyl)phthalate	6.16E-02	8.50E-02	9.61	9.59E-12	5.91E-14	8.15E-14
Butylbenzylphthalate	5.50E-02	5.50E-02	4.78	1.96E-02	1.08E-04	1.08E-04
Benzot(g,h,i)perylene	6.60E-02	6.60E-02	6.51	8.17E-05	5.39E-07	5.39E-07
Naphthalene	9.60E-02	9.60E-02	3.59	2.05E-01	1.97E-03	1.97E-03
Phenanthrene	7.50E-02	7.50E-02	4.46	4.13E-02	3.10E-04	3.10E-04
Pyrene	7.50E-02	7.50E-02	4.88	1.53E-02	1.15E-04	1.15E-04
Aldrin	1.17E-03	1.70E-03	6.50	8.49E-05	9.93E-09	1.44E-08
Alpha-chlordane	4.40E-04	4.40E-04	3.32	2.97E-01	1.31E-05	1.31E-05
Gamma-chlordane	3.90E-04	7.90E-04	3.32	2.97E-01	1.16E-05	2.35E-05
4,4-DDD	1.90E-04	1.90E-04	6.00	5.30E-04	1.01E-08	1.01E-08
4,4-DDE	1.05E-03	2.00E-03	5.70	1.44E-03	1.51E-07	2.88E-07
Endosulfan I	7.40E-05	7.40E-05	3.83	1.40E-01	1.04E-06	1.04E-06
Endosulfan II	5.20E-04	5.20E-04	3.83	1.40E-01	7.28E-06	7.28E-06
Endosulfan Sulfate	2.40E-04	2.40E-04	3.83	1.40E-01	3.36E-06	3.36E-06
Endrin	5.40E-04	5.40E-04	4.56	3.30E-02	1.78E-06	1.78E-06
Endrin Aldehyde	3.70E-04	3.70E-04	4.56	3.30E-02	1.22E-06	1.22E-06
Endrin Ketone	1.70E-03	1.70E-03	4.56	3.30E-02	5.61E-06	5.61E-06
Aroclor-1248	1.12E-01	2.00E-01	6.04	4.62E-04	5.16E-06	9.23E-06
Cyanide	3.10E-01	6.20E-01	NA	-	0.00E+00	0.00E+00
Iron	1.33E+04	2.62E+04	NA	4.00E-03	5.31E+00	1.05E+01
Lead	2.21E+01	4.11E+01	NA	4.50E-02	9.94E-02	1.85E-01
Mercury	1.10E-01	2.00E-01	NA	9.00E-01	9.90E-03	1.80E-02
Selenium	4.50E-01	7.80E-01	NA	2.50E-02	1.13E-03	1.95E-03
Silver	7.20E-01	7.20E-01	NA	4.00E-01	2.88E-02	2.88E-02
Zinc	1.51E+02	5.13E+02	NA	1.50E+00	2.26E+01	7.70E+01

NA: Not Applicable

<sup>1</sup> from Superfund Public Health Evaluation Manual (SPHEM), 1986 or Howard, 1991.

<sup>2</sup> Organics from Briggs et al. (1982), Inorganics from Baes et al. (1984).

<sup>3</sup> Plant concentration = Soil concentration x Plant uptake factor.

Note: Plant concentration converted from dry weight to wet weight by multiplying by 0.1 (Baes et al., 1984)

TABLE E-3. PLANT CONCENTRATIONS, AQUATIC HABITATS, BENNINGTON LANDFILL.

Contaminant of Concern	Sediment Concentration		Log Kow <sup>1</sup>	Plant Uptake Factor <sup>2</sup>	Plant Concentration <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)
<b>Diversions Ditch</b>						
Copper	2.01E+01	3.35E+01	NA	4.00E-01	8.04E-01	1.34E+00
Cyanide	1.10E-01	1.40E-01	NA	-	0.00E+00	0.00E+00
Lead	1.60E+01	3.42E+01	NA	4.50E-02	7.20E-02	1.54E-01
Mercury	2.40E-01	3.90E-01	NA	9.00E-01	2.16E-02	3.51E-02
Silver	3.42E+00	7.40E+00	NA	4.00E-01	1.37E-01	2.96E-01
<b>Drainage Pond</b>						
N-Nitrosodi-n-propylamine	3.04E-01	3.10E-01	1.50	7.28E-01	2.21E-02	2.26E-02
4,4-DDE	8.55E-02	9.30E-02	5.70	1.44E-03	1.23E-05	1.34E-05
Aroclor 1242	8.63E+01	1.00E+02	6.04	4.62E-04	3.98E-03	4.62E-03
Arsenic	2.02E+01	2.75E+01	NA	4.00E-02	8.08E-02	1.10E-01
Barium	5.08E+02	5.08E+02	NA	1.50E-01	7.62E+00	7.62E+00
Beryllium	3.18E-01	3.95E-01	NA	1.00E-02	3.95E-04	3.18E-04
Copper	3.25E+01	3.27E+01	NA	4.00E-01	1.30E+00	1.31E+00
Cyanide	3.05E-01	4.10E-01	NA	-	0.00E+00	0.00E+00
Iron	3.69E+04	4.75E+04	NA	4.00E-03	1.48E+01	1.90E+01
Lead	1.44E+02	1.69E+02	NA	4.50E-02	6.47E-01	7.61E-01
Manganese	5.72E+02	8.07E+02	NA	2.50E-01	1.43E+01	2.02E+01
Mercury	2.35E-01	2.40E-01	NA	9.00E-01	2.12E-02	2.16E-02
Nickel	1.46E+01	1.69E+01	NA	6.00E-02	8.76E-02	1.01E-01
Zinc	2.17E+02	2.21E+02	NA	1.50E+00	3.25E+01	3.31E+01
<b>Ponds B and C/Hewitt Brook</b>						
Acetone	3.45E-01	2.00E+00	-0.24	1.47E-01	5.08E-03	2.94E-02
Alpha-Chlordane	2.52E-03	1.10E-02	3.32	2.97E-01	7.48E-05	3.27E-04
Endosulfan II	7.30E-04	7.30E-04	3.83	1.40E-01	1.02E-05	1.02E-05
Antimony	3.17E+00	9.40E+00	NA	2.00E-01	6.34E-02	1.88E-01
Arsenic	1.86E+01	6.42E+01	NA	4.00E-02	7.42E-02	2.57E-01
Barium	8.80E+02	4.17E+03	NA	1.50E-01	1.32E+01	6.26E+01
Cobalt	3.32E+01	1.21E+02	NA	2.00E-02	6.64E-02	2.42E-01
Copper	1.31E+01	2.61E+01	NA	4.00E-01	5.25E-01	1.04E+00
Cyanide	2.50E-01	1.00E+00	NA	-	0.00E+00	0.00E+00
Iron	3.98E+04	1.82E+05	NA	4.00E-03	1.59E+01	7.28E+01
Lead	1.32E+01	5.53E+01	NA	4.50E-02	5.95E-02	2.49E-01
Manganese	3.04E+03	1.33E+04	NA	2.50E-01	7.59E+01	3.33E+02
Nickel	1.03E+01	2.19E+01	NA	6.00E-02	6.18E-02	1.31E-01
Selenium	1.19E+00	4.80E+00	NA	2.50E-02	2.98E-03	1.20E-02
Silver	5.70E-01	1.60E+00	NA	4.00E-01	2.28E-02	6.40E-02

NA: Not Applicable

<sup>1</sup> from Superfund Public Health Evaluation Manual (SPHEM), 1986 or Howard, 1991.

<sup>2</sup> Organics from Briggs et al. (1982), Inorganics from Baes et al. (1984).

<sup>3</sup> Plant concentration = Sediment concentration x Plant uptake factor.

Note: Plant concentration converted from dry weight to wet weight by multiplying by 0.1 (Baes et al., 1984)

TABLE E-4. EARTHWORM CONCENTRATIONS OF COCS, FIELD HABITAT.

Contaminant of Concern	Soil Concentration		Earthworm Bioaccumulation Factor <sup>1</sup>	Earthworm Concentration <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)
Acetone	1.03E-02	2.70E-02	1.74E+00 c	4.48E-03	1.17E-02
Xylene (Total)	7.80E-03	1.40E-02	5.57E+00 c	1.09E-02	1.95E-02
Bis(2-ethylhexyl)phthalate	3.71E-01	1.10E+00	1.82E+01 c	1.69E+00	5.00E+00
Butylbenzylphthalate	2.73E-01	5.40E-01	7.39E+00 c	5.04E-01	9.98E-01
Di-n-butylphthalate	4.90E-02	4.90E-02	8.61E+00 c	1.05E-01	1.05E-01
Benzo(a)anthracene	4.40E-02	4.40E-02	1.25E-01 b	1.37E-03	1.37E-03
Fluoranthene	1.20E-01	1.20E-01	7.90E-02 b	2.37E-03	2.37E-03
Phenanthrene	7.30E-02	7.30E-02	1.22E-01 b	2.23E-03	2.23E-03
Pyrene	2.37E-01	5.00E-01	9.20E-02 b	5.45E-03	1.15E-02
Aldrin	9.70E-04	1.90E-03	1.02E+01 c	2.47E-03	4.84E-03
Gamma-chlordane	1.40E-03	2.40E-03	5.63E+00 c	1.97E-03	3.38E-03
4,4-DDD	1.70E-04	1.70E-04	4.70E+00 a	2.00E-04	2.00E-04
4,4-DDE	1.64E-03	3.90E-03	1.60E+01 a	1.56E-03	1.56E-02
4,4-DDT	2.01E-03	6.80E-03	5.10E+00 a	2.56E-03	8.67E-03
Dieldrin	1.86E-03	2.70E-03	1.50E+01 a	6.98E-03	1.01E-02
Endosulfan I	2.34E-03	8.90E-03	6.19E+00 c	3.62E-03	1.38E-02
Endosulfan II	1.57E-03	3.90E-03	6.19E+00 c	2.43E-03	6.04E-03
Endrin	6.10E-05	6.10E-05	7.09E+00 c	1.08E-04	1.08E-04
Endrin Ketone	4.92E-03	9.50E-03	7.09E+00 c	8.72E-03	1.68E-02
Heptachlor epoxide	1.42E-03	2.40E-03	1.30E+01 a	4.62E-03	7.80E-03
Methoxychlor	8.98E-03	1.40E-02	7.42E+00 c	1.67E-02	2.60E-02
Aroclor-1016	1.08E+00	6.40E+00	9.35E+00 c	2.52E+00	1.50E+01
Aroclor-1248	1.35E+00	1.10E+01	9.35E+00 c	3.15E+00	2.57E+01
Beryllium	2.70E-01	7.40E-01	1.00E+00 f	6.75E-02	1.85E-01
Cadmium	7.80E-01	1.40E+00	2.53E+01 d	4.93E+00	8.86E+00
Cobalt	1.92E+01	6.28E+01	3.80E-01 e	1.82E+00	5.97E+00
Copper	2.75E+01	5.34E+01	7.20E-01 d	4.94E+00	9.61E+00
Iron	2.27E+04	3.96E+04	4.95E-02 d	2.81E+02	4.90E+02
Lead	2.14E+01	5.21E+01	5.68E-01 d	3.04E+00	7.40E+00
Nickel	1.37E+01	2.08E+01	1.00E+00 f	3.42E+00	5.20E+00
Thallium	4.40E-01	7.50E-01	1.00E+00 f	1.10E-01	1.87E-01
Zinc	5.94E+01	8.41E+01	4.89E+00 d	7.26E+01	1.03E+02

<sup>1</sup> Organics from a) Beyer and Gish (1980), b) Marquenie et al. (1987), or c) Markwell et al. (1989); Inorganics from d) Ireland (1983), e) Helmke et al. (1983), or f) no data available, therefore earthworm concentration equals soil concentration.

<sup>2</sup> Earthworm concentration = Soil Concentration x Earthworm Bioaccumulation Factor.

Note: Earthworm concentration converted from dry weight to wet weight by multiplying by 0.25 (Beyer and Gish, 1980).

TABLE E-5. EARTHWORM CONCENTRATIONS OF COCS, WOODED HABITAT.

Contaminant of Concern	Soil Concentration		Earthworm Bioaccumulation Factor <sup>1</sup>	Earthworm Concentration <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)
Toluene	6.90E-03	9.00E-03	5.04E+00 c	8.70E-03	1.13E-02
Bis(2-ethylhexyl)phthalate	6.16E-02	8.50E-02	1.82E+01 c	2.80E-01	3.87E-01
Butylbenzylphthalate	5.50E-02	5.50E-02	7.39E+00 c	1.02E-01	1.02E-01
Benzo(g,h,i)perylene	6.60E-02	6.60E-02	2.44E-01 b	4.03E-03	4.03E-03
Naphthalene	9.60E-02	9.60E-02	5.92E+00 c	1.42E-01	1.42E-01
Phenanthrene	7.50E-02	7.50E-02	1.22E-01 b	2.28E-03	2.28E-03
Pyrene	7.50E-02	7.50E-02	9.20E-02 b	1.73E-03	1.73E-03
Aldrin	1.17E-03	1.70E-03	1.02E+01 c	2.98E-03	4.33E-03
Alpha-chlordane	4.40E-04	4.40E-04	5.63E+00 c	6.19E-04	6.19E-04
Gamma-chlordane	3.90E-04	7.90E-04	5.63E+00 c	5.49E-04	1.11E-03
4,4-DDD	1.90E-04	1.90E-04	4.70E+00 a	2.23E-04	2.23E-04
4,4-DDE	1.05E-03	2.00E-03	1.60E+01 a	4.20E-03	8.00E-03
Endosulfan I	7.40E-05	7.40E-05	6.19E+00 c	1.15E-04	1.15E-04
Endosulfan II	5.20E-04	5.20E-04	6.19E+00 c	8.05E-04	8.05E-04
Endosulfan Sulfate	2.40E-04	2.40E-04	6.19E+00 c	3.71E-04	3.71E-04
Endrin	5.40E-04	5.40E-04	7.09E+00 c	9.57E-04	9.57E-04
Endrin Aldehyde	3.70E-04	3.70E-04	7.09E+00 c	6.56E-04	6.56E-04
Endrin Ketone	1.70E-03	1.70E-03	7.09E+00 c	3.01E-03	3.01E-03
Aroclor-1248	1.12E-01	2.00E-01	9.35E+00 c	2.61E-01	4.67E-01
Cyanide	3.10E-01	6.20E-01	1.00E+00 g	7.75E-02	1.55E-01
Iron	1.33E+04	2.62E+04	4.95E-02 d	1.64E+02	3.24E+02
Lead	2.21E+01	4.11E+01	5.68E-01 d	3.14E+00	5.84E+00
Mercury	1.10E-01	2.00E-01	1.08E+00 e	2.97E-02	5.40E-02
Selenium	4.50E-01	7.80E-01	5.88E+00 f	6.62E-01	1.15E+00
Silver	7.20E-01	7.20E-01	1.00E+00 g	1.80E-01	1.80E-01
Zinc	1.51E+02	5.13E+02	4.89E+00 d	1.84E+02	6.27E+02

<sup>1</sup> BAFs from a) Beyer and Gish (1980), b) Marquenie et al. (1987), c) Markwell et al. (1989), d) Ireland (1983), e) Helmke et al. (1983), f) Beyer and Cromartie (1987), or g) no data available, therefore, earthworm concentration equals soil concentration.

<sup>2</sup> Earthworm concentration = Soil Concentration x Earthworm Bioaccumulation Factor.

Note: Earthworm concentration converted from dry weight to wet weight by multiplying by 0.25 (Beyer and Gish, 1980).

TABLE E-6. ANNELID CONCENTRATIONS, AQUATIC HABITATS.

Contaminant of Concern	Sediment Concentration		Annelid Bioaccumulation Factor <sup>1</sup>	Annelid Concentration <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)
<b>Diversion Ditch</b>					
Copper	2.01E+01	3.35E+01	7.20E-01 c	3.62E+00	6.03E+00
Cyanide	1.10E-01	1.40E-01	1.00E+00 f	2.75E-02	3.50E-02
Lead	1.60E+01	3.42E+01	5.68E-01 c	2.27E+00	4.86E+00
Mercury	2.40E-01	3.90E-01	1.08E+00 d	6.48E-02	1.05E-01
Silver	3.42E+00	7.40E+00	1.00E+00 f	8.55E-01	1.85E+00
<b>Drainage Pond</b>					
N-Nitrosodi-n-propylamine	3.04E-01	3.10E-01	2.36E+00 b	1.79E-01	1.83E-01
4,4-DDE	8.55E-02	9.30E-02	1.60E+01 a	3.42E-01	3.72E-01
Aroclor 1242	8.63E+01	1.00E+02	9.35E+00 b	2.02E+02	2.34E+02
Arsenic	2.02E+01	2.75E+01	3.00E-01 c	1.52E+00	2.06E+00
Barium	5.08E+02	5.08E+02	3.67E-02 c	4.66E+00	4.66E+00
Beryllium	3.18E-01	3.95E-01	1.00E+00 f	7.95E-02	9.88E-02
Copper	3.22E+01	3.27E+01	7.20E-01 c	5.80E+00	5.89E+00
Cyanide	3.05E-01	4.10E-01	1.00E+00 f	7.63E-02	1.03E-01
Iron	3.69E+04	4.75E+04	4.95E-02 c	4.57E+02	5.88E+02
Lead	1.44E+02	1.69E+02	5.68E-01 c	2.04E+01	2.40E+01
Manganese	5.72E+02	8.07E+02	4.42E-02 c	6.32E+00	8.92E+00
Mercury	2.35E-01	2.40E-01	1.08E+00 d	6.35E-02	6.48E-02
Nickel	1.46E+01	1.69E+01	1.00E+00 f	3.65E+00	4.23E+00
Zinc	2.17E+02	2.21E+02	9.35E+00 c	5.07E+02	5.17E+02
<b>Ponds B and C/Hewitt Brook</b>					
Acetone	3.45E-01	2.00E+00	1.74E+00 b	1.50E-01	8.70E-01
Alpha-Chlordane	2.52E-03	1.10E-02	5.63E+00 b	3.55E-03	1.55E-02
Endosulfan II	7.30E-04	7.30E-04	6.19E+00 b	1.13E-03	1.13E-03
Antimony	3.17E+00	9.40E+00	6.55E-02 c	5.19E-02	1.54E-01
Arsenic	1.86E+01	6.42E+01	3.00E-01 c	1.39E+00	4.82E+00
Barium	8.80E+02	4.17E+03	3.67E-02 c	8.08E+00	3.83E+01
Cobalt	3.32E+01	1.21E+02	3.80E-01 d	3.16E+00	1.15E+01
Copper	1.31E+01	2.61E+01	7.20E-01 c	2.36E+00	4.70E+00
Cyanide	2.50E-01	1.00E+00	1.00E+00 f	6.25E-02	2.50E-01
Iron	3.98E+04	1.82E+05	4.95E-02 c	4.93E+02	2.25E+03
Lead	1.32E+01	5.53E+01	5.68E-01 c	1.88E+00	7.85E+00
Manganese	3.04E+03	1.33E+04	4.42E-02 c	3.35E+01	1.47E+02
Nickel	1.03E+01	2.19E+01	1.00E+00 f	2.58E+00	5.48E+00
Selenium	1.19E+00	4.80E+00	5.88E+00 e	1.75E+00	7.06E+00
Silver	5.70E-01	1.60E+00	1.00E+00 f	1.43E-01	4.00E-01

<sup>1</sup> BAFs from a) Beyer and Gish (1980), b) Markwell et al. (1989), c) Ireland (1983), d) Helmke et al. (1983), e) Beyer and Cromartie (1987), or f) no data available, therefore earthworm concentration equals soil concentration.

<sup>2</sup> Annelid concentration = Sediment Concentration x Annelid Bioaccumulation Factor.

Note: Annelid concentration converted from dry weight to wet weight by multiplying by 0.25 (Beyer and Gish, 1980).

TABLE E-7. ESTIMATED EXPOSURE DOSES OF WHITE-FOOTED MOUSE TO SOIL/PLANT INGESTION, FIELD HABITAT.

Contaminant of Concern	Soil Concentration		Plant Concentration		Daily Intake Rate (kg/day)	Body Weight (kg)	Soil Exposure Dose <sup>1</sup>		Plant Exposure Dose <sup>2</sup>		Total Exposure Dose <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)
Acetone	1.03E-02	2.70E-02	1.51E-04	3.97E-04	7.50E-03	2.50E-02	3.09E-05	8.10E-05	4.48E-05	1.18E-04	7.57E-05	1.99E-04
Xylene (Total)	7.80E-03	1.40E-02	2.49E-04	4.47E-04	7.50E-03	2.50E-02	2.34E-05	4.20E-05	7.40E-05	1.33E-04	9.74E-05	1.75E-04
Bis(2-ethylhexyl)phthalate	3.71E-01	1.10E+00	3.56E-13	1.05E-12	7.50E-03	2.50E-02	1.11E-03	3.30E-03	1.06E-13	3.13E-13	1.11E-03	3.30E-03
Butylbenzylphthalate	2.73E-01	5.40E-01	5.35E-04	1.06E-03	7.50E-03	2.50E-02	8.19E-04	1.62E-03	1.59E-04	3.14E-04	9.78E-04	1.93E-03
Di-n-butylphthalate	4.90E-02	4.90E-02	9.70E-06	9.70E-06	7.50E-03	2.50E-02	1.47E-04	1.47E-04	2.88E-06	2.88E-06	1.50E-04	1.50E-04
Benzo(a)anthracene	4.40E-02	4.40E-02	8.71E-06	8.71E-06	7.50E-03	2.50E-02	1.32E-04	1.32E-04	2.59E-06	2.59E-06	1.35E-04	1.35E-04
Fluoranthene	1.20E-01	1.20E-01	1.74E-04	1.74E-04	7.50E-03	2.50E-02	3.60E-04	3.60E-04	5.17E-05	5.17E-05	4.12E-04	4.12E-04
Phenanthrene	7.30E-02	7.30E-02	3.01E-04	3.01E-04	7.50E-03	2.50E-02	2.19E-04	2.19E-04	8.95E-05	8.95E-05	3.09E-04	3.09E-04
Pyrene	2.37E-01	5.00E-01	3.63E-04	7.65E-04	7.50E-03	2.50E-02	7.11E-04	1.50E-03	1.08E-04	2.27E-04	8.19E-04	1.73E-03
Aldrin	9.70E-04	1.90E-03	8.24E-09	1.61E-08	7.50E-03	2.50E-02	2.91E-06	5.70E-06	2.45E-09	4.79E-09	2.91E-06	5.70E-06
Gamma-chlordane	1.40E-03	2.40E-03	4.16E-05	7.13E-05	7.50E-03	2.50E-02	4.20E-06	7.20E-06	1.23E-05	2.12E-05	1.65E-05	2.84E-05
4,4-DDD	1.70E-04	1.70E-04	9.01E-09	9.01E-09	7.50E-03	2.50E-02	5.10E-07	5.10E-07	2.68E-09	2.68E-09	5.13E-07	5.13E-07
4,4-DDE	1.64E-03	3.90E-03	2.36E-07	5.62E-07	7.50E-03	2.50E-02	4.92E-06	1.17E-05	7.01E-08	1.67E-07	4.99E-06	1.19E-05
4,4-DDT	2.01E-03	6.80E-03	2.50E-08	8.47E-08	7.50E-03	2.50E-02	6.03E-06	2.04E-05	7.43E-09	2.51E-08	6.04E-06	2.04E-05
Dieldrin	1.86E-03	2.70E-03	1.04E-05	1.50E-05	7.50E-03	2.50E-02	5.58E-06	8.10E-06	3.08E-06	4.47E-06	8.66E-06	1.26E-05
Endosulfan I	2.34E-03	8.90E-03	3.28E-05	1.25E-04	7.50E-03	2.50E-02	7.02E-06	2.67E-05	9.73E-06	3.70E-05	1.67E-05	6.37E-05
Endosulfan II	1.57E-03	3.90E-03	2.20E-05	5.46E-05	7.50E-03	2.50E-02	4.71E-06	1.17E-05	6.53E-06	1.62E-05	1.12E-05	2.79E-05
Endrin	6.10E-05	6.10E-05	2.01E-07	2.01E-07	7.50E-03	2.50E-02	1.83E-07	1.83E-07	5.97E-08	5.97E-08	2.43E-07	2.43E-07
Endrin Ketone	4.92E-03	9.50E-03	1.62E-05	3.14E-05	7.50E-03	2.50E-02	1.48E-05	2.85E-05	4.82E-06	9.31E-06	1.96E-05	3.78E-05
Heptachlor epoxide	1.42E-03	2.40E-03	5.18E-07	8.76E-07	7.50E-03	2.50E-02	4.26E-06	7.20E-06	1.54E-07	2.60E-07	4.41E-06	7.46E-06
Methoxychlor	8.98E-03	1.40E-02	1.68E-05	2.62E-05	7.50E-03	2.50E-02	2.69E-05	4.20E-05	4.99E-06	7.78E-06	3.19E-05	4.98E-05
Aroclor-1016	1.08E+00	6.40E+00	4.98E-05	2.95E-04	7.50E-03	2.50E-02	3.24E-03	1.92E-02	1.48E-05	8.77E-05	3.25E-03	1.93E-02
Aroclor-1248	1.35E+00	1.10E+01	6.22E-05	5.08E-04	7.50E-03	2.50E-02	4.04E-03	3.30E-02	1.85E-05	1.51E-04	4.06E-03	3.32E-02
Beryllium	2.70E-01	7.40E-01	2.70E-04	7.40E-04	7.50E-03	2.50E-02	8.10E-04	2.22E-03	8.02E-05	2.20E-04	8.90E-04	2.44E-03
Cadmium	7.80E-01	1.40E+00	4.29E-02	7.70E-02	7.50E-03	2.50E-02	2.34E-03	4.20E-03	1.27E-02	2.29E-02	1.51E-02	2.71E-02
Cobalt	1.92E+01	6.28E+01	3.84E-02	1.26E-01	7.50E-03	2.50E-02	5.75E-02	1.88E-01	1.14E-02	3.73E-02	6.89E-02	2.26E-01
Copper	2.75E+01	5.34E+01	1.10E+00	2.14E+00	7.50E-03	2.50E-02	8.24E-02	1.60E-01	3.26E-01	6.34E-01	4.09E-01	7.95E-01
Iron	2.27E+04	3.96E+04	9.09E+00	1.58E+01	7.50E-03	2.50E-02	6.82E+01	1.19E+02	2.70E+00	4.70E+00	7.09E+01	1.24E+02
Lead	2.14E+01	5.21E+01	9.62E-02	2.34E-01	7.50E-03	2.50E-02	6.41E-02	1.56E-01	2.86E-02	6.96E-02	9.27E-02	2.26E-01
Nickel	1.37E+01	2.08E+01	8.22E-02	1.25E-01	7.50E-03	2.50E-02	4.11E-02	6.24E-02	2.44E-02	3.71E-02	6.55E-02	9.95E-02
Thallium	4.40E-01	7.50E-01	1.76E-04	3.00E-04	7.50E-03	2.50E-02	1.32E-03	2.25E-03	5.23E-05	8.91E-05	1.37E-03	2.34E-03
Zinc	5.94E+01	8.41E+01	8.91E+00	1.26E+01	7.50E-03	2.50E-02	1.78E-01	2.52E-01	2.65E+00	3.75E+00	2.82E+00	4.00E+00

<sup>1</sup> [Soil Concentration x Daily Intake Rate x Percent of Diet Soil Comprises (0.01)] / Body Weight

<sup>2</sup> [Plant Concentration x Daily Intake Rate x Percent of Diet Plants Comprises (0.99)] / Body Weight

<sup>3</sup> Sum of Soil and Plant Exposure Doses

TABLE E-8. ESTIMATED EXPOSURE DOSES OF WHITE-FOOTED MOUSE TO SOIL/PLANT INGESTION, WOODED HABITAT.

Contaminant of Concern	Soil Concentration		Plant Concentration		Daily Intake Rate (kg/day)	Body Weight (kg)	Soil Exposure Dose <sup>1</sup>		Plant Exposure Dose <sup>2</sup>		Total Exposure Dose <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)
Toluene	6.90E-03	9.00E-03	3.74E-04	4.88E-04	7.50E-03	2.50E-02	2.07E-05	2.70E-05	1.11E-04	1.45E-04	1.32E-04	1.72E-04
Bis(2-ethylhexyl)phthalate	6.16E-02	8.50E-02	5.91E-14	8.15E-14	7.50E-03	2.50E-02	1.85E-04	2.55E-04	1.75E-14	2.42E-14	1.85E-04	2.55E-04
Butylbenzylphthalate	5.50E-02	5.50E-02	1.08E-04	1.08E-04	7.50E-03	2.50E-02	1.65E-04	1.65E-04	3.20E-05	3.20E-05	1.97E-04	1.97E-04
Benzo(g,h,i)perylene	6.60E-02	6.60E-02	5.39E-07	5.39E-07	7.50E-03	2.50E-02	1.98E-04	1.98E-04	1.60E-07	1.60E-07	1.98E-04	1.98E-04
Naphthalene	9.60E-02	9.60E-02	1.97E-03	1.97E-03	7.50E-03	2.50E-02	2.88E-04	2.88E-04	5.84E-04	5.84E-04	8.72E-04	8.72E-04
Phenanthrene	7.50E-02	7.50E-02	3.10E-04	3.10E-04	7.50E-03	2.50E-02	2.25E-04	2.25E-04	9.20E-05	9.20E-05	3.17E-04	3.17E-04
Pyrene	7.50E-02	7.50E-02	1.15E-04	1.15E-04	7.50E-03	2.50E-02	2.25E-04	2.25E-04	3.41E-05	3.41E-05	2.59E-04	2.59E-04
Aldrin	1.17E-03	1.70E-03	9.93E-09	1.44E-08	7.50E-03	2.50E-02	3.51E-06	5.10E-06	2.95E-09	4.29E-09	3.51E-06	5.10E-06
Alpha-chlordane	4.40E-04	4.40E-04	1.31E-05	1.31E-05	7.50E-03	2.50E-02	1.32E-06	1.32E-06	3.88E-06	3.88E-06	5.20E-06	5.20E-06
Gamma-chlordane	3.90E-04	7.90E-04	1.16E-05	2.35E-05	7.50E-03	2.50E-02	1.17E-06	2.37E-06	3.45E-06	6.97E-06	4.62E-06	9.34E-06
4,4-DDD	1.90E-04	1.90E-04	1.01E-08	1.01E-08	7.50E-03	2.50E-02	5.70E-07	5.70E-07	2.99E-09	2.99E-09	5.73E-07	5.73E-07
4,4-DDE	1.05E-03	2.00E-03	1.51E-07	2.88E-07	7.50E-03	2.50E-02	3.15E-06	6.00E-06	4.49E-08	8.55E-08	3.19E-06	6.09E-06
Endosulfan I	7.40E-05	7.40E-05	1.04E-06	1.04E-06	7.50E-03	2.50E-02	2.22E-07	2.22E-07	3.08E-07	3.08E-07	5.30E-07	5.30E-07
Endosulfan II	5.20E-04	5.20E-04	7.28E-06	7.28E-06	7.50E-03	2.50E-02	1.56E-06	1.56E-06	2.16E-06	2.16E-06	3.72E-06	3.72E-06
Endosulfan Sulfate	2.40E-04	2.40E-04	3.36E-06	3.36E-06	7.50E-03	2.50E-02	7.20E-07	7.20E-07	9.98E-07	9.98E-07	1.72E-06	1.72E-06
Endrin	5.40E-04	5.40E-04	1.78E-06	1.78E-06	7.50E-03	2.50E-02	1.62E-06	1.62E-06	5.29E-07	5.29E-07	2.15E-06	2.15E-06
Endrin Aldehyde	3.70E-04	3.70E-04	1.22E-06	1.22E-06	7.50E-03	2.50E-02	1.11E-06	1.11E-06	3.63E-07	3.63E-07	1.47E-06	1.47E-06
Endrin Ketone	1.70E-03	1.70E-03	5.61E-06	5.61E-06	7.50E-03	2.50E-02	5.10E-06	5.10E-06	1.67E-06	1.67E-06	6.77E-06	6.77E-06
Aroclor-1248	1.12E-01	2.00E-01	5.16E-06	9.23E-06	7.50E-03	2.50E-02	3.36E-04	6.00E-04	1.53E-06	2.74E-06	3.38E-04	6.03E-04
Cyanide	3.10E-01	6.20E-01	0.00E+00	0.00E+00	7.50E-03	2.50E-02	9.30E-04	1.86E-03	0.00E+00	0.00E+00	9.30E-04	1.86E-03
Iron	1.33E+04	2.62E+04	5.31E+00	1.05E+01	7.50E-03	2.50E-02	3.98E+01	7.86E+01	1.58E+00	3.11E+00	4.14E+01	8.17E+01
Lead	2.21E+01	4.11E+01	9.94E-02	1.85E-01	7.50E-03	2.50E-02	6.62E-02	1.23E-01	2.95E-02	5.49E-02	9.57E-02	1.78E-01
Mercury	1.10E-01	2.00E-01	9.90E-03	1.80E-02	7.50E-03	2.50E-02	3.30E-04	6.00E-04	2.94E-03	5.35E-03	3.27E-03	5.95E-03
Selenium	4.50E-01	7.80E-01	1.13E-03	1.95E-03	7.50E-03	2.50E-02	1.35E-03	2.34E-03	3.34E-04	5.79E-04	1.68E-03	2.92E-03
Silver	7.20E-01	7.20E-01	2.88E-02	2.88E-02	7.50E-03	2.50E-02	2.16E-03	2.16E-03	8.55E-03	8.55E-03	1.07E-02	1.07E-02
Zinc	1.51E+02	5.13E+02	2.26E+01	7.70E+01	7.50E-03	2.50E-02	4.52E-01	1.54E+00	6.71E+00	2.29E+01	7.17E+00	2.44E+01

<sup>1</sup> [Soil Concentration x Daily Intake Rate x Percent of Diet Soil Comprises (0.01)] / Body Weight

<sup>2</sup> [Plant Concentration x Daily Intake Rate x Percent of Diet Plants Comprises (0.99)] / Body Weight

<sup>3</sup> Sum of Soil and Plant Exposure Doses

TABLE E-9. ESTIMATED EXPOSURE DOSES OF SHORT-TAILED SHREW TO SOIL/WORM INGESTION, FIELD HABITAT.

Contaminant of Concern	Soil Concentration		Worm Concentration		Daily Intake Rate (kg/day)	Body Weight (kg)	Soil Exposure Dose <sup>1</sup>		Worm Exposure Dose <sup>2</sup>		Total Exposure Dose <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)
	Acetone	1.03E-02	2.70E-02	4.48E-03			1.17E-02	1.30E-02	2.00E-02	3.35E-04	8.78E-04	2.77E-03
Xylene (Total)	7.80E-03	1.40E-02	1.09E-02	1.95E-02	1.30E-02	2.00E-02	2.53E-04	4.55E-04	6.73E-03	1.20E-02	6.98E-03	1.25E-02
Bis(2-ethylhexyl)phthalate	3.71E-01	1.10E+00	1.69E+00	5.00E+00	1.30E-02	2.00E-02	1.21E-02	3.58E-02	1.04E+00	3.09E+00	1.06E+00	3.12E+00
Butylbenzylphthalate	2.73E-01	5.40E-01	5.04E-01	9.98E-01	1.30E-02	2.00E-02	8.87E-03	1.75E-02	3.11E-01	6.16E-01	3.20E-01	6.34E-01
Di-n-butylphthalate	4.90E-02	4.90E-02	1.05E-01	1.05E-01	1.30E-02	2.00E-02	1.59E-03	1.59E-03	6.51E-02	6.51E-02	6.67E-02	6.67E-02
Benzo(a)anthracene	4.40E-02	4.40E-02	1.37E-03	1.37E-03	1.30E-02	2.00E-02	1.43E-03	1.43E-03	8.49E-04	8.49E-04	2.28E-03	2.28E-03
Fluoranthene	1.20E-01	1.20E-01	2.37E-03	2.37E-03	1.30E-02	2.00E-02	3.90E-03	3.90E-03	1.46E-03	1.46E-03	5.36E-03	5.36E-03
Phenanthrene	7.30E-02	7.30E-02	2.23E-03	2.23E-03	1.30E-02	2.00E-02	2.37E-03	2.37E-03	1.37E-03	1.37E-03	3.75E-03	3.75E-03
Pyrene	2.37E-01	5.00E-01	5.45E-03	1.15E-02	1.30E-02	2.00E-02	7.70E-03	1.63E-02	3.37E-03	7.10E-03	1.11E-02	2.34E-02
Aldrin	9.70E-04	1.90E-03	2.47E-03	4.84E-03	1.30E-02	2.00E-02	3.15E-05	6.17E-05	1.53E-03	2.99E-03	1.56E-03	3.05E-03
Gamma-chlordane	1.40E-03	2.40E-03	1.97E-03	3.38E-03	1.30E-02	2.00E-02	4.55E-05	7.80E-05	1.22E-03	2.09E-03	1.26E-03	2.16E-03
4,4-DDD	1.70E-04	1.70E-04	2.00E-04	2.00E-04	1.30E-02	2.00E-02	5.53E-06	5.53E-06	1.23E-04	1.23E-04	1.29E-04	1.29E-04
4,4-DDE	1.64E-03	3.90E-03	6.56E-03	1.56E-02	1.30E-02	2.00E-02	5.33E-05	1.27E-04	4.05E-03	9.63E-03	4.10E-03	9.76E-03
4,4-DDT	2.01E-03	6.80E-03	2.56E-03	8.67E-03	1.30E-02	2.00E-02	6.53E-05	2.21E-04	1.58E-03	5.35E-03	1.65E-03	5.57E-03
Dieldrin	1.86E-03	2.70E-03	6.98E-03	1.01E-02	1.30E-02	2.00E-02	6.05E-05	8.78E-05	4.31E-03	6.25E-03	4.37E-03	6.34E-03
Endosulfan I	2.34E-03	8.90E-03	3.62E-03	1.38E-02	1.30E-02	2.00E-02	7.61E-05	2.89E-04	2.24E-03	8.50E-03	2.31E-03	8.79E-03
Endosulfan II	1.57E-03	3.90E-03	2.43E-03	6.04E-03	1.30E-02	2.00E-02	5.10E-05	1.27E-04	1.50E-03	3.73E-03	1.55E-03	3.85E-03
Endrin	6.10E-05	6.10E-05	1.08E-04	1.08E-04	1.30E-02	2.00E-02	1.98E-06	1.98E-06	6.67E-05	6.67E-05	6.87E-05	6.87E-05
Endrin Ketone	4.92E-03	9.50E-03	8.72E-03	1.68E-02	1.30E-02	2.00E-02	1.60E-04	3.09E-04	5.39E-03	1.04E-02	5.54E-03	1.07E-02
Heptachlor epoxide	1.42E-03	2.40E-03	4.62E-03	7.80E-03	1.30E-02	2.00E-02	4.62E-05	7.80E-05	2.85E-03	4.82E-03	2.90E-03	4.89E-03
Methoxychlor	8.98E-03	1.40E-02	1.67E-02	2.60E-02	1.30E-02	2.00E-02	2.92E-04	4.55E-04	1.03E-02	1.60E-02	1.06E-02	1.65E-02
Aroclor-1016	1.08E+00	6.40E+00	2.52E+00	1.50E+01	1.30E-02	2.00E-02	3.51E-02	2.08E-01	1.56E+00	9.24E+00	1.59E+00	9.44E+00
Aroclor-1248	1.35E+00	1.10E+01	3.15E+00	2.57E+01	1.30E-02	2.00E-02	4.38E-02	3.57E-01	1.95E+00	1.59E+01	1.99E+00	1.62E+01
Beryllium	2.70E-01	7.40E-01	6.75E-02	1.85E-01	1.30E-02	2.00E-02	8.77E-03	2.40E-02	4.17E-02	1.14E-01	5.05E-02	1.38E-01
Cadmium	7.80E-01	1.40E+00	4.93E+00	8.86E+00	1.30E-02	2.00E-02	2.54E-02	4.55E-02	3.05E+00	5.47E+00	3.07E+00	5.51E+00
Cobalt	1.92E+01	6.28E+01	1.82E+00	5.97E+00	1.30E-02	2.00E-02	6.23E-01	2.04E+00	1.13E+00	3.68E+00	1.75E+00	5.73E+00
Copper	2.75E+01	5.34E+01	4.94E+00	9.61E+00	1.30E-02	2.00E-02	8.92E-01	1.74E+00	3.05E+00	5.94E+00	3.94E+00	7.67E+00
Iron	2.27E+04	3.96E+04	2.81E+02	4.90E+02	1.30E-02	2.00E-02	7.38E+02	1.29E+03	1.74E+02	3.03E+02	9.12E+02	1.59E+03
Lead	2.14E+01	5.21E+01	3.04E+00	7.40E+00	1.30E-02	2.00E-02	6.95E-01	1.69E+00	1.87E+00	4.57E+00	2.57E+00	6.26E+00
Nickel	1.37E+01	2.08E+01	3.42E+00	5.20E+00	1.30E-02	2.00E-02	4.45E-01	6.76E-01	2.11E+00	3.21E+00	2.56E+00	3.89E+00
Thallium	4.40E-01	7.50E-01	1.10E-01	1.87E-01	1.30E-02	2.00E-02	1.43E-02	2.44E-02	6.79E-02	1.16E-01	8.22E-02	1.40E-01
Zinc	5.94E+01	8.41E+01	7.26E+01	1.03E+02	1.30E-02	2.00E-02	1.93E+00	2.73E+00	4.48E+01	6.35E+01	4.68E+01	6.62E+01

<sup>1</sup> [Soil Concentration x Daily Intake Rate x Percent of Diet Soil Comprises (0.05)] / Body Weight

<sup>2</sup> [Worm Concentration x Daily Intake Rate x Percent of Diet Worms Comprises (0.95)] / Body Weight

<sup>3</sup> Sum of Soil and Worm Exposure Doses

TABLE E-10. ESTIMATED EXPOSURE DOSES OF SHORT-TAILED SHREW TO SOIL/WORM INGESTION, WOODED HABITAT.

Contaminant of Concern	Soil Concentration		Worm Concentration		Daily Intake Rate (kg/day)	Body Weight (kg)	Soil Exposure Dose <sup>1</sup>		Worm Exposure Dose <sup>2</sup>		Total Exposure Dose <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)
Toluene	6.90E-03	9.00E-03	8.70E-03	1.13E-02	1.30E-02	2.00E-02	2.24E-04	2.92E-04	5.37E-03	7.01E-03	5.60E-03	7.30E-03
Bis(2-ethylhexyl)phthalate	6.16E-02	8.50E-02	2.80E-01	3.87E-01	1.30E-02	2.00E-02	2.00E-03	2.76E-03	1.73E-01	2.39E-01	1.75E-01	2.41E-01
Butylbenzylphthalate	5.50E-02	5.50E-02	1.02E-01	1.02E-01	1.30E-02	2.00E-02	1.79E-03	1.79E-03	6.27E-02	6.27E-02	6.45E-02	6.45E-02
Benzo(g,h,i)perylene	6.60E-02	6.60E-02	4.03E-03	4.03E-03	1.30E-02	2.00E-02	2.15E-03	2.15E-03	2.49E-03	2.49E-03	4.63E-03	4.63E-03
Naphthalene	9.60E-02	9.60E-02	1.42E-01	1.42E-01	1.30E-02	2.00E-02	3.12E-03	3.12E-03	8.77E-02	8.77E-02	9.09E-02	9.09E-02
Phenanthrene	7.50E-02	7.50E-02	2.28E-03	2.28E-03	1.30E-02	2.00E-02	2.44E-03	2.44E-03	1.41E-03	1.41E-03	3.85E-03	3.85E-03
Pyrene	7.50E-02	7.50E-02	1.72E-03	1.72E-03	1.30E-02	2.00E-02	2.44E-03	2.44E-03	1.07E-03	1.07E-03	3.50E-03	3.50E-03
Aldrin	1.17E-03	1.70E-03	2.98E-03	4.33E-03	1.30E-02	2.00E-02	3.80E-05	5.52E-05	1.84E-03	2.67E-03	1.88E-03	2.73E-03
Alpha-chlordane	4.40E-04	4.40E-04	6.19E-04	6.19E-04	1.30E-02	2.00E-02	1.43E-05	1.43E-05	3.82E-04	3.82E-04	3.97E-04	3.97E-04
Gamma-chlordane	3.90E-04	7.90E-04	5.49E-04	1.11E-03	1.30E-02	2.00E-02	1.27E-05	2.57E-05	3.39E-04	6.87E-04	3.52E-04	7.12E-04
4,4-DDD	1.90E-04	1.90E-04	2.23E-04	2.23E-04	1.30E-02	2.00E-02	6.18E-06	6.18E-06	1.38E-04	1.38E-04	1.44E-04	1.44E-04
4,4-DDE	1.05E-03	2.00E-03	4.20E-03	8.00E-03	1.30E-02	2.00E-02	3.41E-05	6.50E-05	2.59E-03	4.94E-03	2.63E-03	5.00E-03
Endosulfan I	7.40E-05	7.40E-05	1.15E-04	1.15E-04	1.30E-02	2.00E-02	2.40E-06	2.40E-06	7.07E-05	7.07E-05	7.31E-05	7.31E-05
Endosulfan II	5.20E-04	5.20E-04	8.05E-04	8.05E-04	1.30E-02	2.00E-02	1.69E-05	1.69E-05	4.97E-04	4.97E-04	5.14E-04	5.14E-04
Endosulfan Sulfate	2.40E-04	2.40E-04	3.71E-04	3.71E-04	1.30E-02	2.00E-02	7.80E-06	7.80E-06	2.29E-04	2.29E-04	2.37E-04	2.37E-04
Endrin	5.40E-04	5.40E-04	9.57E-04	9.57E-04	1.30E-02	2.00E-02	1.75E-05	1.75E-05	5.91E-04	5.91E-04	6.09E-04	6.09E-04
Endrin Aldehyde	3.70E-04	3.70E-04	6.56E-04	6.56E-04	1.30E-02	2.00E-02	1.20E-05	1.20E-05	4.05E-04	4.05E-04	4.17E-04	4.17E-04
Endrin Ketone	1.70E-03	1.70E-03	3.01E-03	3.01E-03	1.30E-02	2.00E-02	5.52E-05	5.52E-05	1.86E-03	1.86E-03	1.92E-03	1.92E-03
Aroclor-1248	1.12E-01	2.00E-01	2.61E-01	4.67E-01	1.30E-02	2.00E-02	3.64E-03	6.50E-03	1.61E-01	2.89E-01	1.65E-01	2.95E-01
Cyanide	3.10E-01	6.20E-01	7.75E-02	1.55E-01	1.30E-02	2.00E-02	1.01E-02	2.02E-02	4.79E-02	9.57E-02	5.79E-02	1.16E-01
Iron	1.33E+04	2.62E+04	1.64E+02	3.24E+02	1.30E-02	2.00E-02	4.31E+02	8.52E+02	1.01E+02	2.00E+02	5.33E+02	1.05E+03
Lead	2.21E+01	4.11E+01	3.14E+00	5.84E+00	1.30E-02	2.00E-02	7.18E-01	1.34E+00	1.94E+00	3.60E+00	2.65E+00	4.94E+00
Mercury	1.10E-01	2.00E-01	2.97E-02	5.40E-02	1.30E-02	2.00E-02	3.58E-03	6.50E-03	1.83E-02	3.33E-02	2.19E-02	3.98E-02
Selenium	4.50E-01	7.80E-01	6.61E-01	1.15E+00	1.30E-02	2.00E-02	1.46E-02	2.54E-02	4.08E-01	7.08E-01	4.23E-01	7.33E-01
Silver	7.20E-01	7.20E-01	1.80E-01	1.80E-01	1.30E-02	2.00E-02	2.34E-02	2.34E-02	1.11E-01	1.11E-01	1.35E-01	1.35E-01
Zinc	1.51E+02	5.13E+02	1.84E+02	6.27E+02	1.30E-02	2.00E-02	4.90E+00	1.67E+01	1.14E+02	3.87E+02	1.19E+02	4.04E+02

<sup>1</sup> [Soil Concentration x Daily Intake Rate x Percent of Diet Soil Comprises (0.05)] / Body Weight

<sup>2</sup> [Worm Concentration x Daily Intake Rate x Percent of Diet Worms Comprises (0.95)] / Body Weight

<sup>3</sup> Sum of Soil and Worm Exposure Doses

**TABLE E-11. ESTIMATED EXPOSURE DOSES OF MUSKRAT TO SEDIMENT/PLANT INGESTION, AQUATIC HABITATS, BENNINGTON LANDFILL.**

Contaminant of Concern	Sediment Conc.		Plant Concentration		Daily Intake Rate (kg/day)	Body Weight (kg)	Sediment Exposure Dose <sup>1</sup>		Plant Exposure Dose <sup>2</sup>		Total Exposure Dose <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)
<b>Diversion Ditch</b>												
Copper	2.01E+01	3.35E+01	8.04E-01	1.34E+00	5.00E-01	1.50E+00	6.70E-02	1.12E-01	2.65E-01	4.42E-01	3.32E-01	5.54E-01
Cyanide	1.10E-01	1.40E-01	0.00E+00	0.00E+00	5.00E-01	1.50E+00	3.67E-04	4.67E-04	0.00E+00	0.00E+00	3.67E-04	4.67E-04
Lead	1.60E+01	3.42E+01	7.20E-02	1.54E-01	5.00E-01	1.50E+00	5.33E-02	1.14E-01	2.38E-02	5.08E-02	7.71E-02	1.65E-01
Mercury	2.40E-01	3.90E-01	2.16E-02	3.51E-02	5.00E-01	1.50E+00	8.00E-04	1.30E-03	7.13E-03	1.16E-02	7.93E-03	1.29E-02
Silver	3.42E+00	7.40E+00	1.37E-01	2.96E-01	5.00E-01	1.50E+00	1.14E-02	2.47E-02	4.51E-02	9.77E-02	5.65E-02	1.22E-01
<b>Drainage Pond</b>												
N-Nitrosodi-n-propylamine	3.04E-01	3.10E-01	2.21E-02	2.26E-02	5.00E-01	1.50E+00	1.01E-03	1.03E-03	7.30E-03	7.45E-03	8.31E-03	8.48E-03
4,4-DDE	8.55E-02	9.30E-02	1.23E-05	1.34E-05	5.00E-01	1.50E+00	2.85E-04	3.10E-04	4.06E-06	4.42E-06	2.89E-04	3.14E-04
Aroclor 1242	8.63E+01	1.00E+02	3.98E-03	4.62E-03	5.00E-01	1.50E+00	2.88E-01	3.33E-01	1.31E-03	1.52E-03	2.89E-01	3.35E-01
Arsenic	2.02E+01	2.75E+01	8.08E-02	1.10E-01	5.00E-01	1.50E+00	6.73E-02	9.17E-02	2.67E-02	3.63E-02	9.40E-02	1.28E-01
Barium	5.08E+02	5.08E+02	7.62E+00	7.62E+00	5.00E-01	1.50E+00	1.69E+00	1.69E+00	2.51E+00	2.51E+00	4.21E+00	4.21E+00
Beryllium	3.18E-01	3.95E-01	3.95E-04	3.18E-04	5.00E-01	1.50E+00	1.06E-03	1.32E-03	1.30E-04	1.05E-04	1.19E-03	1.42E-03
Copper	3.25E+01	3.27E+01	1.30E+00	1.31E+00	5.00E-01	1.50E+00	1.08E-01	1.09E-01	4.28E-01	4.32E-01	5.37E-01	5.41E-01
Cyanide	3.05E-01	4.10E-01	0.00E+00	0.00E+00	5.00E-01	1.50E+00	1.02E-03	1.37E-03	0.00E+00	0.00E+00	1.02E-03	1.37E-03
Iron	3.69E+04	4.75E+04	1.48E+01	1.90E+01	5.00E-01	1.50E+00	1.23E+02	1.58E+02	4.88E+00	6.27E+00	1.28E+02	1.65E+02
Lead	1.44E+02	1.69E+02	6.47E-01	7.61E-01	5.00E-01	1.50E+00	4.79E-01	5.63E-01	2.13E-01	2.51E-01	6.93E-01	8.14E-01
Manganese	5.72E+02	8.07E+02	1.43E+01	2.02E+01	5.00E-01	1.50E+00	1.91E+00	2.69E+00	4.72E+00	6.65E+00	6.63E+00	9.34E+00
Mercury	2.35E-01	2.40E-01	2.12E-02	2.16E-02	5.00E-01	1.50E+00	7.83E-04	8.00E-04	6.98E-03	7.13E-03	7.76E-03	7.93E-03
Nickel	1.46E+01	1.69E+01	8.76E-02	1.01E-01	5.00E-01	1.50E+00	4.87E-02	5.63E-02	2.89E-02	3.35E-02	7.76E-02	8.98E-02
Zinc	2.17E+02	2.21E+02	3.25E+01	3.31E+01	5.00E-01	1.50E+00	7.23E-01	7.37E-01	1.07E+01	1.09E+01	1.15E+01	1.17E+01
<b>Ponds B and C/Hewitt Brook</b>												
Acetone	3.45E-01	2.00E+00	5.08E-03	2.94E-02	5.00E-01	1.50E+00	1.15E-03	6.67E-03	1.68E-03	9.70E-03	2.83E-03	1.64E-02
Alpha-Chlordane	2.52E-03	1.10E-02	7.48E-05	3.27E-04	5.00E-01	1.50E+00	8.40E-06	3.67E-05	2.47E-05	1.08E-04	3.31E-05	1.44E-04
Endosulfan II	7.30E-04	7.30E-04	1.02E-05	1.02E-05	5.00E-01	1.50E+00	2.43E-06	2.43E-06	3.37E-06	3.37E-06	5.81E-06	5.81E-06
Antimony	3.17E+00	9.40E+00	6.34E-02	1.88E-01	5.00E-01	1.50E+00	1.06E-02	3.13E-02	2.09E-02	6.20E-02	3.15E-02	9.34E-02
Arsenic	1.86E+01	6.42E+01	7.42E-02	2.57E-01	5.00E-01	1.50E+00	6.19E-02	2.14E-01	2.45E-02	8.47E-02	8.64E-02	2.99E-01
Barium	8.80E+02	4.17E+03	1.32E+01	6.26E+01	5.00E-01	1.50E+00	2.93E+00	1.39E+01	4.36E+00	2.06E+01	7.29E+00	3.45E+01
Cobalt	3.32E+01	1.21E+02	6.64E-02	2.42E-01	5.00E-01	1.50E+00	1.11E-01	4.03E-01	2.19E-02	7.99E-02	1.33E-01	4.83E-01
Copper	1.31E+01	2.61E+01	5.25E-01	1.04E+00	5.00E-01	1.50E+00	4.37E-02	8.70E-02	1.73E-01	3.45E-01	2.17E-01	4.32E-01
Cyanide	2.50E-01	1.00E+00	0.00E+00	0.00E+00	5.00E-01	1.50E+00	8.33E-04	3.33E-03	0.00E+00	0.00E+00	8.33E-04	3.33E-03
Iron	3.98E+04	1.82E+05	1.59E+01	7.28E+01	5.00E-01	1.50E+00	1.33E+02	6.07E+02	5.26E+00	2.40E+01	1.38E+02	6.31E+02
Lead	1.32E+01	5.53E+01	5.95E-02	2.49E-01	5.00E-01	1.50E+00	4.41E-02	1.84E-01	1.96E-02	8.21E-02	6.37E-02	2.66E-01
Manganese	3.04E+03	1.33E+04	7.59E+01	3.33E+02	5.00E-01	1.50E+00	1.01E+01	4.43E+01	2.50E+01	1.10E+02	3.52E+01	1.54E+02
Nickel	1.03E+01	2.19E+01	6.18E-02	1.31E-01	5.00E-01	1.50E+00	3.43E-02	7.30E-02	2.04E-02	4.34E-02	5.47E-02	1.16E-01
Selenium	1.19E+00	4.80E+00	2.98E-03	1.20E-02	5.00E-01	1.50E+00	3.97E-03	1.60E-02	9.82E-04	3.96E-03	4.95E-03	2.00E-02
Silver	5.70E-01	1.60E+00	2.28E-02	6.40E-02	5.00E-01	1.50E+00	1.90E-03	5.33E-03	7.52E-03	2.11E-02	9.42E-03	2.65E-02

<sup>1</sup> [(Sediment Concentration x Daily Intake Rate x Percent of Diet Sediment Comprises (0.01)) / Body Weight

<sup>2</sup> [(Plant Concentration x Daily Intake Rate x Percent of Diet Plants Comprises (0.99)) / Body Weight

<sup>3</sup> Sum of Sediment and Plant Exposure Doses

**TABLE E-12. ESTIMATED EXPOSURE DOSES OF STAR-NOSED MOLE TO SEDIMENT/WORM INGESTION, AQUATIC HABITATS, BENNINGTON LANDFILL.**

Contaminant of Concern	Sediment Conc.		Worm Concentration		Daily Intake Rate (kg/day)	Body Weight (kg)	Sediment Exposure Dose <sup>1</sup>		Worm Exposure Dose <sup>2</sup>		Total Exposure Dose <sup>3</sup>	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)	Mean (mg/kg/day)	Maximum (mg/kg/day)
<b>Diversion Ditch</b>												
Copper	2.01E+01	3.35E+01	3.62E+00	6.03E+00	3.00E-02	6.00E-02	5.03E-01	8.38E-01	1.72E+00	2.86E+00	2.22E+00	3.70E+00
Cyanide	1.10E-01	1.40E-01	2.75E-02	3.50E-02	3.00E-02	6.00E-02	2.75E-03	3.50E-03	1.31E-02	1.66E-02	1.58E-02	2.01E-02
Lead	1.60E+01	3.42E+01	2.27E+00	4.86E+00	3.00E-02	6.00E-02	4.00E-01	8.55E-01	1.08E+00	2.31E+00	1.48E+00	3.16E+00
Mercury	2.40E-01	3.90E-01	6.48E-02	1.05E-01	3.00E-02	6.00E-02	6.00E-03	9.75E-03	3.08E-02	5.00E-02	3.68E-02	5.98E-02
Silver	3.42E+00	7.40E+00	8.55E-01	1.85E+00	3.00E-02	6.00E-02	8.55E-02	1.85E-01	4.06E-01	8.79E-01	4.92E-01	1.06E+00
<b>Drainage Pond</b>												
N-Nitrosodi-n-propylamine	3.04E-01	3.10E-01	1.79E-01	1.83E-01	3.00E-02	6.00E-02	7.60E-03	7.75E-03	8.52E-02	8.69E-02	9.28E-02	9.46E-02
4,4-DDE	8.55E-02	9.30E-02	3.42E-01	3.72E-01	3.00E-02	6.00E-02	2.14E-03	2.33E-03	1.62E-01	1.77E-01	1.65E-01	1.79E-01
Aroclor 1242	8.63E+01	1.00E+02	2.02E+02	2.34E+02	3.00E-02	6.00E-02	2.16E+00	2.50E+00	9.58E+01	1.11E+02	9.80E+01	1.14E+02
Arsenic	2.02E+01	2.75E+01	1.51E+00	2.06E+00	3.00E-02	6.00E-02	5.05E-01	6.87E-01	7.20E-01	9.80E-01	1.22E+00	1.67E+00
Barium	5.08E+02	5.08E+02	4.66E+00	4.66E+00	3.00E-02	6.00E-02	1.27E+01	1.27E+01	2.21E+00	2.21E+00	1.49E+01	1.49E+01
Beryllium	3.18E-01	3.95E-01	7.95E-02	9.88E-02	3.00E-02	6.00E-02	7.95E-03	9.88E-03	3.78E-02	4.69E-02	4.57E-02	5.68E-02
Copper	3.22E+01	3.27E+01	5.80E+00	5.89E+00	3.00E-02	6.00E-02	8.05E-01	8.18E-01	2.75E+00	2.80E+00	3.56E+00	3.61E+00
Cyanide	3.05E-01	4.10E-01	7.62E-02	1.02E-01	3.00E-02	6.00E-02	7.62E-03	1.03E-02	3.62E-02	4.87E-02	4.38E-02	5.89E-02
Iron	3.69E+04	4.75E+04	4.57E+02	5.88E+02	3.00E-02	6.00E-02	9.23E+02	1.19E+03	2.17E+02	2.79E+02	1.14E+03	1.47E+03
Lead	1.44E+02	1.69E+02	2.04E+01	2.40E+01	3.00E-02	6.00E-02	3.60E+00	4.23E+00	9.71E+00	1.14E+01	1.33E+01	1.56E+01
Manganese	5.72E+02	8.07E+02	6.32E+00	8.92E+00	3.00E-02	6.00E-02	1.43E+01	2.02E+01	3.00E+00	4.24E+00	1.73E+01	2.44E+01
Mercury	2.35E-01	2.40E-01	6.35E-02	6.48E-02	3.00E-02	6.00E-02	5.88E-03	6.00E-03	3.01E-02	3.08E-02	3.60E-02	3.68E-02
Nickel	1.46E+01	1.69E+01	3.65E+00	4.22E+00	3.00E-02	6.00E-02	3.65E-01	4.22E-01	1.73E+00	2.01E+00	2.10E+00	2.43E+00
Zinc	2.17E+02	2.21E+02	5.07E+02	5.17E+02	3.00E-02	6.00E-02	5.43E+00	5.53E+00	2.41E+02	2.45E+02	2.46E+02	2.51E+02
<b>Ponds B and C/Hewitt Brook</b>												
Acetone	3.45E-01	2.00E+00	1.50E-01	8.70E-01	3.00E-02	6.00E-02	8.64E-03	5.00E-02	7.12E-02	4.13E-01	7.99E-02	4.63E-01
Alpha-Chlordane	2.52E-03	1.10E-02	3.55E-03	1.55E-02	3.00E-02	6.00E-02	6.30E-05	2.75E-04	1.68E-03	7.35E-03	1.75E-03	7.63E-03
Endosulfan II	7.30E-04	7.30E-04	1.13E-03	1.13E-03	3.00E-02	6.00E-02	1.82E-05	1.82E-05	5.37E-04	5.37E-04	5.55E-04	5.55E-04
Antimony	3.17E+00	9.40E+00	5.19E-02	1.54E-01	3.00E-02	6.00E-02	7.93E-02	2.35E-01	2.47E-02	7.31E-02	1.04E-01	3.08E-01
Arsenic	1.86E+01	6.42E+01	1.39E+00	4.82E+00	3.00E-02	6.00E-02	4.64E-01	1.61E+00	6.61E-01	2.29E+00	1.13E+00	3.89E+00
Barium	8.80E+02	4.17E+03	8.08E+00	3.83E+01	3.00E-02	6.00E-02	2.20E+01	1.04E+02	3.84E+00	1.82E+01	2.58E+01	1.22E+02
Cobalt	3.32E+01	1.21E+02	3.16E+00	1.15E+01	3.00E-02	6.00E-02	8.31E-01	3.03E+00	1.50E+00	5.46E+00	2.33E+00	8.49E+00
Copper	1.31E+01	2.61E+01	2.36E+00	4.70E+00	3.00E-02	6.00E-02	3.28E-01	6.53E-01	1.12E+00	2.23E+00	1.45E+00	2.88E+00
Cyanide	2.50E-01	1.00E+00	6.25E-02	2.50E-01	3.00E-02	6.00E-02	6.25E-03	2.50E-02	2.97E-02	1.19E-01	3.59E-02	1.44E-01
Iron	3.98E+04	1.82E+05	4.93E+02	2.25E+03	3.00E-02	6.00E-02	9.96E+02	4.55E+03	2.34E+02	1.07E+03	1.23E+03	5.62E+03
Lead	1.32E+01	5.53E+01	1.88E+00	7.85E+00	3.00E-02	6.00E-02	3.31E-01	1.38E+00	8.92E-01	3.73E+00	1.22E+00	5.11E+00
Manganese	3.04E+03	1.33E+04	3.35E+01	1.47E+02	3.00E-02	6.00E-02	7.59E+01	3.33E+02	1.59E+01	6.98E+01	9.18E+01	4.02E+02
Nickel	1.03E+01	2.19E+01	2.58E+00	5.47E+00	3.00E-02	6.00E-02	2.58E-01	5.47E-01	1.22E+00	2.60E+00	1.48E+00	3.15E+00
Selenium	1.19E+00	4.80E+00	1.75E+00	7.06E+00	3.00E-02	6.00E-02	2.97E-02	1.20E-01	8.31E-01	3.35E+00	8.61E-01	3.47E+00
Silver	5.70E-01	1.60E+00	1.42E-01	4.00E-01	3.00E-02	6.00E-02	1.42E-02	4.00E-02	6.77E-02	1.90E-01	8.19E-02	2.30E-01

<sup>1</sup> [Sediment Concentration x Daily Intake Rate x Percent of Diet Sediment Comprises (0.05)] / Body Weight

<sup>2</sup> [Worm Concentration x Daily Intake Rate x Percent of Diet Worms Comprises (0.95)] / Body Weight

<sup>3</sup> Sum of Sediment and Worm Exposure Doses

TABLE E-13. ESTIMATED DIETARY CONTAMINANT CONCENTRATIONS FOR WHITE-FOOTED MOUSE AND SHORT-TAILED SHREW, FIELD HABITAT.

Contaminant of Concern	Soil Concentration		Mouse Diet Portion	Shrew Diet Portion	Plant Concentration		Mouse Diet Portion	Worm Concentration		Shrew Diet Portion	Mouse Diet <sup>1</sup>		Shrew Diet <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
Acetone	1.03E-02	2.70E-02	0.01	0.05	1.51E-04	3.97E-04	0.99	4.48E-03	1.17E-02	0.95	2.52E-04	6.63E-04	4.77E-03	1.25E-02
Xylene (Total)	7.80E-03	1.40E-02	0.01	0.05	2.49E-04	4.47E-04	0.99	1.09E-02	1.95E-02	0.95	3.25E-04	5.82E-04	1.07E-02	1.92E-02
Bis(2-ethylhexyl)phthalate	3.71E-01	1.10E+00	0.01	0.05	3.56E-13	1.05E-12	0.99	1.69E+00	5.00E+00	0.95	3.71E-03	1.10E-02	1.62E+00	4.81E+00
Butylbenzylphthalate	2.73E-01	5.40E-01	0.01	0.05	5.35E-04	1.06E-03	0.99	5.04E-01	9.98E-01	0.95	3.26E-03	6.45E-03	4.92E-01	9.75E-01
Di-n-butylphthalate	4.90E-02	4.90E-02	0.01	0.05	9.70E-06	9.70E-06	0.99	1.05E-01	1.05E-01	0.95	5.00E-04	5.00E-04	1.03E-01	1.03E-01
Benzo(a)anthracene	4.40E-02	4.40E-02	0.01	0.05	8.71E-06	8.71E-06	0.99	1.37E-03	1.37E-03	0.95	4.49E-04	4.49E-04	3.51E-03	3.51E-03
Fluoranthene	1.20E-01	1.20E-01	0.01	0.05	1.74E-04	1.74E-04	0.99	2.37E-03	2.37E-03	0.95	1.37E-03	1.37E-03	8.25E-03	8.25E-03
Phenanthrene	7.30E-02	7.30E-02	0.01	0.05	3.01E-04	3.01E-04	0.99	2.23E-03	2.23E-03	0.95	1.03E-03	1.03E-03	5.77E-03	5.77E-03
Pyrene	2.37E-01	5.00E-01	0.01	0.05	3.63E-04	7.65E-04	0.99	5.45E-03	1.15E-02	0.95	2.73E-03	5.76E-03	1.70E-02	3.59E-02
Aldrin	9.70E-04	1.90E-03	0.01	0.05	8.24E-09	1.61E-08	0.99	2.47E-03	4.84E-03	0.95	9.71E-06	1.90E-05	2.39E-03	4.69E-03
Gamma-chlordane	1.40E-03	2.40E-03	0.01	0.05	4.16E-05	7.13E-05	0.99	1.97E-03	3.38E-03	0.95	5.52E-05	9.46E-05	1.94E-03	3.33E-03
4,4-DDD	1.70E-04	1.70E-04	0.01	0.05	9.01E-09	9.01E-09	0.99	2.00E-04	2.00E-04	0.95	1.71E-06	1.71E-06	1.98E-04	1.98E-04
4,4-DDE	1.64E-03	3.90E-03	0.01	0.05	2.36E-07	5.62E-07	0.99	6.56E-03	1.56E-02	0.95	1.66E-05	3.96E-05	6.31E-03	1.50E-02
4,4-DDT	2.01E-03	6.80E-03	0.01	0.05	2.50E-08	8.47E-08	0.99	2.56E-03	8.67E-03	0.95	2.01E-05	6.81E-05	2.54E-03	8.58E-03
Dieldrin	1.86E-03	2.70E-03	0.01	0.05	1.04E-05	1.50E-05	0.99	6.98E-03	1.01E-02	0.95	2.89E-05	4.19E-05	6.72E-03	9.75E-03
Endosulfan I	2.34E-03	8.90E-03	0.01	0.05	3.28E-05	1.25E-04	0.99	3.62E-03	1.38E-02	0.95	5.58E-05	2.12E-04	3.56E-03	1.35E-02
Endosulfan II	1.57E-03	3.90E-03	0.01	0.05	2.20E-05	5.46E-05	0.99	2.43E-03	6.04E-03	0.95	3.75E-05	9.31E-05	2.39E-03	5.93E-03
Endrin	6.10E-05	6.10E-05	0.01	0.05	2.01E-07	2.01E-07	0.99	1.08E-04	1.08E-04	0.95	8.09E-07	8.09E-07	1.06E-04	1.06E-04
Endrin Ketone	4.92E-03	9.50E-03	0.01	0.05	1.62E-05	3.14E-05	0.99	8.72E-03	1.68E-02	0.95	6.53E-05	1.26E-04	8.53E-03	1.65E-02
Heptachlor epoxide	1.42E-03	2.40E-03	0.01	0.05	5.18E-07	8.76E-07	0.99	4.62E-03	7.80E-03	0.95	1.47E-05	2.49E-05	4.46E-03	7.53E-03
Methoxychlor	8.98E-03	1.40E-02	0.01	0.05	1.68E-05	2.62E-05	0.99	1.67E-02	2.60E-02	0.95	1.06E-04	1.66E-04	1.63E-02	2.54E-02
Aroclor-1016	1.08E+00	6.40E+00	0.01	0.05	4.98E-05	2.95E-04	0.99	2.52E+00	1.50E+01	0.95	1.08E-02	6.43E-02	2.45E+00	1.45E+01
Aroclor-1248	1.35E+00	1.10E+01	0.01	0.05	6.22E-05	5.08E-04	0.99	3.15E+00	2.57E+01	0.95	1.35E-02	1.11E-01	3.06E+00	2.50E+01
Beryllium	2.70E-01	7.40E-01	0.01	0.05	2.70E-04	7.40E-04	0.99	6.75E-02	1.85E-01	0.95	2.97E-03	8.13E-03	7.76E-02	2.13E-01
Cadmium	7.80E-01	1.40E+00	0.01	0.05	4.29E-02	7.70E-02	0.99	4.93E+00	8.86E+00	0.95	5.03E-02	9.02E-02	4.73E+00	8.48E+00
Cobalt	1.92E+01	6.28E+01	0.01	0.05	3.84E-02	1.26E-01	0.99	1.82E+00	5.97E+00	0.95	2.30E-01	7.52E-01	2.69E+00	8.81E+00
Copper	2.75E+01	5.34E+01	0.01	0.05	1.10E+00	2.14E+00	0.99	4.94E+00	9.61E+00	0.95	1.36E+00	2.65E+00	6.07E+00	1.18E+01
Iron	2.27E+04	3.96E+04	0.01	0.05	9.09E+00	1.58E+01	0.99	2.81E+02	4.90E+02	0.95	2.36E+02	4.12E+02	1.40E+03	2.45E+03
Lead	2.14E+01	5.21E+01	0.01	0.05	9.62E-02	2.34E-01	0.99	3.04E+00	7.40E+00	0.95	3.09E-01	7.53E-01	3.95E+00	9.63E+00
Nickel	1.37E+01	2.08E+01	0.01	0.05	8.22E-02	1.25E-01	0.99	3.42E+00	5.20E+00	0.95	2.18E-01	3.32E-01	3.94E+00	5.98E+00
Thallium	4.40E-01	7.50E-01	0.01	0.05	1.76E-04	3.00E-04	0.99	1.10E-01	1.87E-01	0.95	4.57E-03	7.80E-03	1.27E-01	2.16E-01
Zinc	5.94E+01	8.41E+01	0.01	0.05	8.91E+00	1.26E+01	0.99	7.26E+01	1.03E+02	0.95	9.41E+00	1.33E+01	7.20E+01	1.02E+02

<sup>1</sup> (Soil Concentration)(Soil Diet Portion for Mouse) + (Plant Concentration)(Plant Diet Portion for Mouse)

<sup>2</sup> (Soil Concentration)(Soil Diet Portion for Shrew) + (Worm Concentration)(Worm Diet Portion for Shrew)

TABLE E-14. ESTIMATED DIETARY CONTAMINANT CONCENTRATIONS FOR WHITE-FOOTED MOUSE AND SHORT-TAILED SHREW, WOODED HABITAT.

Contaminant of Concern	Soil Concentration		Mouse Diet Portion	Shrew Diet Portion	Plant Concentration		Mouse Diet Portion	Worm Concentration		Shrew Diet Portion	Mouse Diet <sup>1</sup>		Shrew Diet <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
Toluene	6.90E-03	9.00E-03	0.01	0.05	3.74E-04	4.88E-04	0.99	8.70E-03	1.13E-02	0.95	4.39E-04	5.73E-04	8.61E-03	1.12E-02
Bis(2-ethylhexyl)phthalate	6.16E-02	8.50E-02	0.01	0.05	5.91E-14	8.15E-14	0.99	2.80E-01	3.87E-01	0.95	6.16E-04	8.50E-04	2.69E-01	3.71E-01
Butylbenzylphthalate	5.50E-02	5.50E-02	0.01	0.05	1.08E-04	1.08E-04	0.99	1.02E-01	1.02E-01	0.95	6.57E-04	6.57E-04	9.93E-02	9.93E-02
Benzo(g,h,i)perylene	6.60E-02	6.60E-02	0.01	0.05	5.39E-07	5.39E-07	0.99	4.03E-03	4.03E-03	0.95	6.61E-04	6.61E-04	7.12E-03	7.12E-03
Naphthalene	9.60E-02	9.60E-02	0.01	0.05	1.97E-03	1.97E-03	0.99	1.42E-01	1.42E-01	0.95	2.91E-03	2.91E-03	1.40E-01	1.40E-01
Phenanthrene	7.50E-02	7.50E-02	0.01	0.05	3.10E-04	3.10E-04	0.99	2.28E-03	2.28E-03	0.95	1.06E-03	1.06E-03	5.92E-03	5.92E-03
Pyrene	7.50E-02	7.50E-02	0.01	0.05	1.15E-04	1.15E-04	0.99	1.72E-03	1.72E-03	0.95	8.64E-04	8.64E-04	5.39E-03	5.39E-03
Aldrin	1.17E-03	1.70E-03	0.01	0.05	9.39E-09	1.44E-08	0.99	2.98E-03	4.33E-03	0.95	1.17E-05	1.70E-05	2.89E-03	4.20E-03
Alpha-chlordane	4.40E-04	4.40E-04	0.01	0.05	1.31E-05	1.31E-05	0.99	6.19E-04	6.19E-04	0.95	1.73E-05	1.73E-05	6.10E-04	6.10E-04
Gamma-chlordane	3.90E-04	7.90E-04	0.01	0.05	1.16E-05	2.35E-05	0.99	5.49E-04	1.11E-03	0.95	1.54E-05	3.11E-05	5.41E-04	1.10E-03
4,4-DDD	1.90E-04	1.90E-04	0.01	0.05	1.01E-08	1.01E-08	0.99	2.23E-04	2.23E-04	0.95	1.91E-06	1.91E-06	2.22E-04	2.22E-04
4,4-DDE	1.05E-03	2.00E-03	0.01	0.05	1.51E-07	2.88E-07	0.99	4.20E-03	8.00E-03	0.95	1.06E-05	2.03E-05	4.04E-03	7.70E-03
Endosulfan I	7.40E-05	7.40E-05	0.01	0.05	1.04E-06	1.04E-06	0.99	1.15E-04	1.15E-04	0.95	1.77E-06	1.77E-06	1.12E-04	1.12E-04
Endosulfan II	5.20E-04	5.20E-04	0.01	0.05	7.28E-06	7.28E-06	0.99	8.05E-04	8.05E-04	0.95	1.24E-05	1.24E-05	7.90E-04	7.90E-04
Endosulfan Sulfate	2.40E-04	2.40E-04	0.01	0.05	3.36E-06	3.36E-06	0.99	3.71E-04	3.71E-04	0.95	5.73E-06	5.73E-06	3.65E-04	3.65E-04
Endrin	5.40E-04	5.40E-04	0.01	0.05	1.78E-06	1.78E-06	0.99	9.57E-04	9.57E-04	0.95	7.16E-06	7.16E-06	9.36E-04	9.36E-04
Endrin Aldehyde	3.70E-04	3.70E-04	0.01	0.05	1.22E-06	1.22E-06	0.99	6.56E-04	6.56E-04	0.95	4.91E-06	4.91E-06	6.42E-04	6.42E-04
Endrin Ketone	1.70E-03	1.70E-03	0.01	0.05	5.61E-06	5.61E-06	0.99	3.01E-03	3.01E-03	0.95	2.26E-05	2.26E-05	2.95E-03	2.95E-03
Aroclor-1248	1.12E-01	2.00E-01	0.01	0.05	5.16E-06	9.23E-06	0.99	2.61E-01	4.67E-01	0.95	1.13E-03	2.01E-03	2.54E-01	4.54E-01
Cyanide	3.10E-01	6.20E-01	0.01	0.05	0.00E+00	0.00E+00	0.99	7.75E-02	1.55E-01	0.95	3.10E-03	6.20E-03	8.91E-02	1.78E-01
Iron	1.33E+04	2.62E+04	0.01	0.05	5.31E+00	1.05E+01	0.99	1.64E+02	3.24E+02	0.95	1.38E+02	2.72E+02	8.20E+02	1.62E+03
Lead	2.21E+01	4.11E+01	0.01	0.05	9.94E-02	1.85E-01	0.99	3.14E+00	5.84E+00	0.95	3.19E-01	5.94E-01	4.08E+00	7.60E+00
Mercury	1.10E-01	2.00E-01	0.01	0.05	9.90E-03	1.80E-02	0.99	2.97E-02	5.40E-02	0.95	1.09E-02	1.98E-02	3.37E-02	6.13E-02
Selenium	4.50E-01	7.80E-01	0.01	0.05	1.13E-03	1.95E-03	0.99	6.61E-01	1.15E+00	0.95	5.61E-03	9.73E-03	6.51E-01	1.13E-01
Silver	7.20E-01	7.20E-01	0.01	0.05	2.88E-02	2.88E-02	0.99	1.80E-01	1.80E-01	0.95	3.57E-02	3.57E-02	2.07E-01	2.07E-01
Zinc	1.51E+02	5.13E+02	0.01	0.05	2.26E+01	7.70E+01	0.99	1.84E+02	6.27E+02	0.95	2.39E+01	8.13E+01	1.83E+02	6.21E+02

<sup>1</sup> (Soil Concentration)(Soil Diet Portion for Mouse) + (Plant Concentration)(Plant Diet Portion for Mouse)

<sup>2</sup> (Soil Concentration)(Soil Diet Portion for Shrew) + (Worm Concentration)(Worm Diet Portion for Shrew)

TABLE E-15. ESTIMATED DIETARY CONTAMINANT CONCENTRATIONS FOR MUSKRAT AND STAR-NOSED MOLE, AQUATIC HABITATS, BENNING SAN LANDFILL

Contaminant of Concern	Sediment Conc.		Muskrat Diet Portion	Mole Diet Portion	Plant Concentration		Muskrat Diet Portion	Worm Concentration		Mole Diet Portion	Muskrat Diet <sup>1</sup>		Mole Diet <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
<b>Diverslon Ditch</b>														
Copper	2.01E+01	3.35E+01	0.01	0.05	8.04E-01	1.34E+00	0.99	3.62E+00	6.03E+00	0.95	9.97E-01	1.66E+00	4.44E+00	7.40E+00
Cyanide	1.10E-01	1.40E-01	0.01	0.05	0.00E+00	0.00E+00	0.99	2.75E-02	3.50E-02	0.95	1.10E-03	1.40E-03	3.16E-02	4.03E-02
Lead	1.60E+01	3.42E+01	0.01	0.05	7.20E-02	1.54E-01	0.99	2.27E+00	4.86E+00	0.95	2.31E-01	4.94E-01	2.96E+00	6.32E+00
Mercury	2.40E-01	3.90E-01	0.01	0.05	2.16E-02	3.51E-02	0.99	6.48E-02	1.05E-01	0.95	2.38E-02	3.86E-02	7.36E-02	1.20E-01
Silver	3.42E+00	7.40E+00	0.01	0.05	1.37E-01	2.96E-01	0.99	8.55E-01	1.85E+00	0.95	1.70E-01	3.67E-01	9.83E-01	2.13E+00
<b>Drainage Pond</b>														
N-Nitrosodi-n-propylamine	3.04E-01	3.10E-01	0.01	0.05	2.21E-02	2.26E-02	0.99	1.79E-01	1.83E-01	0.95	2.49E-02	2.54E-02	1.86E-01	1.89E-01
4,4-DDE	8.55E-02	9.30E-02	0.01	0.05	1.23E-05	1.34E-05	0.99	3.42E-01	3.72E-01	0.95	8.67E-04	9.43E-04	3.29E-01	3.58E-01
Aroclor 1242	8.63E+01	1.00E+02	0.01	0.05	3.98E-03	4.62E-03	0.99	2.02E+02	2.34E+02	0.95	8.66E-01	1.00E+00	1.96E+02	2.27E+02
Arsenic	2.02E+01	2.75E+01	0.01	0.05	8.08E-02	1.10E-01	0.99	1.51E+00	2.06E+00	0.95	2.82E-01	3.84E-01	2.45E+00	3.33E+00
Barium	5.08E+02	5.08E+02	0.01	0.05	7.62E+00	7.62E+00	0.99	4.66E+00	4.66E+00	0.95	1.26E+01	1.26E+01	2.98E+01	2.98E+01
Beryllium	3.18E-01	3.95E-01	0.01	0.05	3.95E-04	3.18E-04	0.99	7.95E-02	9.88E-02	0.95	3.57E-03	4.26E-03	9.14E-02	1.14E-01
Copper	3.25E+01	3.27E+01	0.01	0.05	1.30E+00	1.31E+00	0.99	5.80E+00	5.89E+00	0.95	1.61E+00	1.62E+00	7.13E+00	7.23E+00
Cyanide	3.05E-01	4.10E-01	0.01	0.05	0.00E+00	0.00E+00	0.99	7.62E-02	1.02E-01	0.95	3.05E-03	4.10E-03	8.77E-02	1.18E-01
Iron	3.69E+04	4.75E+04	0.01	0.05	1.48E+01	1.90E+01	0.99	4.57E+02	5.88E+02	0.95	3.84E+02	4.94E+02	2.28E+03	2.93E+03
Lead	1.44E+02	1.69E+02	0.01	0.05	6.47E-01	7.61E-01	0.99	2.04E+01	2.40E+01	0.95	2.08E+00	2.44E+00	2.66E+01	3.12E+01
Manganese	5.72E+02	8.07E+02	0.01	0.05	1.43E+01	2.02E+01	0.99	6.32E+00	8.92E+00	0.95	1.99E+01	2.80E+01	3.46E+01	4.88E+01
Mercury	2.35E-01	2.40E-01	0.01	0.05	2.12E-02	2.16E-02	0.99	6.35E-02	6.48E-02	0.95	2.33E-02	2.38E-02	7.20E-02	7.36E-02
Nickel	1.46E+01	1.69E+01	0.01	0.05	8.76E-02	1.01E-01	0.99	3.65E+00	4.22E+00	0.95	2.33E-01	2.69E-01	4.20E+00	4.86E+00
Zinc	2.17E+02	2.21E+02	0.01	0.05	3.25E+01	3.31E+01	0.99	5.07E+02	5.17E+02	0.95	3.44E+01	3.50E+01	4.93E+02	5.02E+02
<b>Ponds B and C/Hewitt Brook</b>														
Acetone	3.45E-01	2.00E+00	0.01	0.05	5.08E-03	2.94E-02	0.99	1.50E-01	8.70E-01	0.95	8.48E-03	4.91E-02	1.60E-01	9.26E-01
Alpha-Chlordane	2.52E-03	1.10E-02	0.01	0.05	7.48E-05	3.27E-04	0.99	3.55E-03	1.55E-02	0.95	9.93E-05	4.33E-04	3.50E-03	1.53E-02
Endosulfan II	7.30E-04	7.30E-04	0.01	0.05	1.02E-05	1.02E-05	0.99	1.13E-03	1.13E-03	0.95	1.74E-05	1.74E-05	1.11E-03	1.11E-03
Antimony	3.17E+00	9.40E+00	0.01	0.05	6.34E-02	1.88E-01	0.99	5.19E-02	1.54E-01	0.95	9.45E-02	2.80E-01	2.08E-01	6.16E-01
Arsenic	1.86E+01	6.42E+01	0.01	0.05	7.42E-02	2.57E-01	0.99	1.39E+00	4.82E+00	0.95	2.59E-01	8.96E-01	2.25E+00	7.78E+00
Barium	8.80E+02	4.17E+03	0.01	0.05	1.32E+01	6.26E+01	0.99	8.08E+00	3.83E+01	0.95	2.19E+01	1.04E+02	5.17E+01	2.45E+02
Cobalt	3.32E+01	1.21E+02	0.01	0.05	6.64E-02	2.42E-01	0.99	3.16E+00	1.15E+01	0.95	3.98E-01	1.45E+00	4.66E+00	1.70E+01
Copper	1.31E+01	2.61E+01	0.01	0.05	5.25E-01	1.04E+00	0.99	2.36E+00	4.70E+00	0.95	6.51E-01	1.29E+00	2.90E+00	5.77E+00
Cyanide	2.50E-01	1.00E+00	0.01	0.05	0.00E+00	0.00E+00	0.99	6.25E-02	2.50E-01	0.95	2.50E-03	1.00E-02	7.19E-02	2.87E-01
Iron	3.98E+04	1.82E+05	0.01	0.05	1.59E+01	7.28E+01	0.99	4.93E+02	2.25E+03	0.95	4.14E+02	1.89E+03	2.46E+03	1.12E+04
Lead	1.32E+01	5.53E+01	0.01	0.05	5.95E-02	2.49E-01	0.99	1.88E+00	7.85E+00	0.95	1.91E-01	7.99E-01	2.45E+00	1.02E+01
Manganese	3.04E+03	1.33E+04	0.01	0.05	7.59E+01	3.33E+02	0.99	3.35E+01	1.47E+02	0.95	1.05E+02	4.62E+02	1.84E+02	8.05E+02
Nickel	1.03E+01	2.19E+01	0.01	0.05	6.18E-02	1.31E-01	0.99	2.58E+00	5.47E+00	0.95	1.64E-01	3.49E-01	2.96E+00	6.30E+00
Selenium	1.19E+00	4.80E+00	0.01	0.05	2.98E-03	1.20E-02	0.99	1.75E+00	7.06E+00	0.95	1.48E-02	5.99E-02	1.72E+00	6.94E+00
Silver	5.70E-01	1.60E+00	0.01	0.05	2.28E-02	6.40E-02	0.99	1.42E-01	4.00E-01	0.95	2.83E-02	7.94E-02	1.64E-01	4.60E-01

<sup>1</sup> (Sediment Concentration)(Sediment Diet Portion for Muskrat) + (Plant Concentration)(Plant Diet Portion for Muskrat)

<sup>2</sup> (Sediment Concentration)(Sediment Diet Portion for Mole) + (Worm Concentration)(Worm Diet Portion for Mole)

TABLE E-16. PCB CONCENTRATIONS OF BIOTA, BENNINGTON LANDFILL.

Biota Species	Dietary Concentration		Biota PCB Bioaccumulation Factor <sup>1</sup>	Biota Concentration <sup>2</sup>	
	Mean (mg/kg)	Maximum (mg/kg)		Mean (mg/kg)	Maximum (mg/kg)
<b>Aroclor 1016</b>					
<b>Field Habitat</b>					
White-footed Mouse	1.08E-02	6.43E-02	1.41E+00 a	2.29E-03	1.36E-02
Short-tailed Shrew	2.45E+00	1.45E+01	1.41E+00 a	5.19E-01	3.02E+00
<b>Aroclor 1242</b>					
<b>Drainage Pond</b>					
Muskrat	8.66E-01	1.00E+00	5.25E+00 a	6.82E-01	7.87E-01
Star-nosed Mole	1.96E+02	2.27E+02	5.25E+00 a	1.54E+02	1.79E+02
Crayfish <sup>3</sup>	9.57E-03	1.11E-02	2.40E+03 b	2.30E+01	2.66E+01
<b>Aroclor 1248</b>					
<b>Field Habitat<sup>a</sup></b>					
White-footed Mouse	1.35E-02	1.11E-01	5.25E+00 a	1.06E-02	8.74E-02
Short-tailed Shrew	3.06E+00	2.50E+01	5.25E+00 a	2.41E+00	1.97E+01
<b>Wooded Habitat</b>					
White-footed Mouse	1.13E-03	2.01E-03	5.25E+00 a	8.90E-04	1.58E-03
Short-tailed Shrew	2.54E-01	4.54E-01	5.25E+00 a	2.00E-01	3.57E-01

<sup>1</sup> BAF from a) Garten and Trabalka (1983) or b) Jorgensen et al. (1991).

<sup>2</sup> Biota concentration = Dietary Concentration x Biota Bioaccumulation Factor.

Note: Biota concentrations assume a 15% fat content for mammalian species.

<sup>3</sup> Crayfish concentration = Pore Water Concentration (mg/L) x Bioaccumulation Factor.

Pore Water Concentration = Sediment Concentration/(Koc)(foc)

TABLE E-17. ESTIMATED DIETARY CONTAMINANT CONCENTRATIONS FOR MINK AND SCREECH OWL, BENNINGTON LANDFILL

Contaminant	Mouse Concentration		Shrew Concentration		Mink Home Range %	Owl Home Range %	Mink Diet		Owl Diet	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
<b>Field Habitat</b>										
Aroclor 1016	2.29E-03	1.36E-02	5.19E-01	3.07+00	0.40	0.03	1.04E-01	6.17E-01	7.82E-03	4.63E-02
Aroclor 1248	1.06E-02	8.74E-02	2.41E+00	1.97E+01	0.40	0.03	4.84E-01	3.96E+00	3.63E-02	2.97E-01
Total PCBs	1.29E-02	1.01E-01	2.93E+00	2.28E+01	0.40	0.03	5.88E-01	4.57E+00	4.41E-02	3.43E-01
<b>Wooded Habitat</b>										
Aroclor 1248	8.90E-04	1.58E-03	2.00E-01	3.57E-01	0.10	0.01	1.00E-02	1.79E-02	1.00E-03	1.79E-03

Contaminant	Muskrat Concen.		Mole Concentration		Crayfish Concen.		Mink Home Range %	Owl Home Range %	Mink Diet		Owl Diet	
	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)			Mean (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)	Maximum (mg/kg)
<b>Drainage Pond</b>												
Aroclor 1242	6.82E-01	7.87E-01	1.54E+02	1.79E+02	2.30E+01	2.66E+01	0.02	0.002	1.17E+00	1.36E+00	1.77E-01	2.06E-01

TOTAL MINK DIETARY PCB INTAKE (MEAN) = 1.77 mg/kg  
 TOTAL OWL DIETARY PCB INTAKE (MEAN) = 0.22 mg/kg

Note: Mink diet assumes equal consumption (weight basis) of small mammals, muskrat and crayfish within each habitat.  
 Owl diet assumes equal consumption of small mammals and crayfish (drainage pond only) within each habitat.

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SUMMARY STATISTICS FOR THE BENNINGTON ( ) - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE-BACKGROUND OVERBURDEN GROUND WATER-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	CARBON DISULFIDE	1	5	1.0000	1.0000	B-3-1_4/28/93	1.500	1.000	10.000
	METHYLENE CHLORIDE	1	5	1.0000	1.0000	B-3-1_01/25/94	1.300	1.000	7.000
Inor.	ALUMINUM	4	4	229.0000	45700.0000	B-3-1T_01/25/94	14434.750	.	.
	ARSENIC	1	3	1.6000	1.6000	B-3-1T_01/25/94	1.533	2.000	4.000
	BARIUM	4	4	25.9000	471.0000	B-3-1T_01/25/94	166.475	.	.
	BERYLLIUM	1	4	2.8000	2.8000	B-3-1T_01/25/94	1.075	1.000	1.000
	CALCIUM	4	4	53100.0000	559000.000	B-3-1T_01/25/94	223775.000	.	.
	CHROMIUM	2	4	17.2000	89.7000	B-3-1T_01/25/94	28.475	7.000	7.000
	COBALT	3	4	3.2000	121.0000	B-3-1T_01/25/94	36.525	2.000	2.000
	COPPER	3	4	3.5000	143.0000	B-3-1T_01/25/94	47.000	3.000	3.000
	CYANIDE	1	4	10.0000	10.0000	B-3-1T_01/25/94	3.313	2.000	2.500
	IRON	4	4	608.0000	167000.000	B-3-1T_01/25/94	51837.000	.	.
	LEAD	3	4	3.6000	49.0000	B-3-1T_01/25/94	16.525	3.000	3.000
	MAGNESIUM	4	4	15300.0000	226000.000	B-3-1T_01/25/94	85475.000	.	.
	MANGANESE	4	4	55.5000	8120.0000	B-3-1T_01/25/94	2547.125	.	.
	MERCURY	2	4	0.2000	0.4400	B-3-1T_01/25/94	0.176	0.040	0.090
	NICKEL	3	4	5.7000	98.4000	B-3-1T_01/25/94	32.350	5.000	5.000
	POTASSIUM	4	4	876.0000	8460.0000	B-3-1T_01/25/94	3416.500	.	.
	SILVER	1	4	2.6000	2.6000	B-3-1T_01/25/94	1.400	2.000	2.000
	SODIUM	4	4	1660.0000	5240.0000	B-3-1T_4/28/93	2955.000	.	.
	VANADIUM	2	4	14.7000	69.0000	B-3-1T_01/25/94	21.675	3.000	3.000
	ZINC	2	3	78.2000	297.0000	B-3-1T_01/25/94	126.767	10.200	10.200

SUMMARY STATISTICS FOR THE BENNINGTON ( - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL JULTS IN MG/KG AND AIR RESULTS IN UG/M<sup>3</sup>

----- TYPE=BACKGROUND OVRBURDEN GW - FILTERED -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ANTIMONY	1	4	3.8000	3.8000	B-3-1D_11/2/93	3.450	2.000	9.000
	BARIUM	4	4	21.4000	29.7000	B-3-1D_11/2/93	24.300	.	.
	CALCIUM	4	4	53800.0000	88400.0000	B-3-1D_11/2/93	71025.000	.	.
	LEAD	1	4	1.0000	1.0000	B-3-1D_11/2/93	1.125	2.000	3.000
	MAGNESIUM	4	4	15100.0000	24200.0000	B-3-1D_11/2/93	19975.000	.	.
	MANGANESE	2	4	4.3000	10.2000	B-3-1D_4/28/93	3.875	1.000	1.000
	MERCURY	1	4	0.2000	0.2000	B-3-1D_11/2/93	0.085	0.040	0.200
	POTASSIUM	4	4	704.0000	1030.0000	B-3-1D_11/2/93	818.500	.	.
	SODIUM	4	4	1550.0000	3070.0000	B-3-1D_4/28/93	2310.000	.	.

SUMMARY STATISTICS FOR THE BENNINGTON PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=BACKGROUND BEDROCK GROUND WATER -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Pest/PCBs	4,4'-DDE	1	4	0.0030	0.0030	B-4-3_01/27/94	0.038	0.100	0.100
	ENDRIN	1	4	0.0060	0.0060	B-4-3_11/4/93	0.039	0.100	0.100
	METHOXYCHLOR	1	4	0.0100	0.0100	B-4-3_01/27/94	0.190	0.500	0.500
Inor.	ALUMINUM	2	4	2960.0000	19600.0000	B-4-3T_01/27/94	5647.750	7.000	55.000
	ANTIMONY	1	3	3.0000	3.0000	B-4-3T_11/4/93	4.000	9.000	9.000
	ARSENIC	2	4	2.8000	3.0000	B-4-3T_11/4/93	2.200	2.000	4.000
	BARIUM	3	4	17.6000	334.0000	B-4-3T_01/27/94	122.275	1.000	1.000
	BERYLLIUM	2	4	1.1000	1.5000	B-4-3T_01/27/94	0.900	1.000	1.000
	CALCIUM	3	4	8600.0000	24500.0000	B-4-3T_01/27/94	13429.837	38.700	38.700
	CHROMIUM	3	4	7.0000	159.0000	B-4-3T_01/27/94	74.125	7.000	7.000
	COBALT	2	4	23.9000	55.8000	B-4-3T_01/27/94	20.550	2.000	3.000
	COPPER	3	4	3.0000	41.9000	B-4-3T_01/27/94	14.975	3.000	3.000
	CYANIDE	1	4	4.2000	4.2000	B-4-3T_11/4/93	4.425	2.000	21.000
	IRON	3	4	49.7000	34900.0000	B-4-3T_01/27/94	10138.050	5.000	5.000
	LEAD	3	4	1.0000	59.4000	B-4-3T_01/27/94	18.525	2.000	2.000
	MAGNESIUM	3	4	2760.0000	10800.0000	B-4-3T_01/27/94	4974.250	14.000	14.000
	MANGANESE	3	4	7.2000	1180.0000	B-4-3T_01/27/94	440.675	1.000	1.000
	MERCURY	2	4	0.0900	0.2000	B-4-3T_11/4/93	0.122	0.200	0.200
	NICKEL	3	4	9.0000	158.0000	B-4-3T_01/27/94	65.250	5.000	5.000
	POTASSIUM	3	4	1050.0000	5670.0000	B-4-3T_01/27/94	2360.250	62.000	62.000
	SODIUM	3	4	2970.0000	4920.0000	B-4-3T_4/29/93	3034.875	119.000	119.000
	THALLIUM	1	2	2.0000	2.0000	B-4-3T_11/4/93	2.500	6.000	6.000
	VANADIUM	2	4	6.7000	32.5000	B-4-3T_01/27/94	10.425	2.000	3.000
ZINC	4	4	6.5000	142.0000	B-4-3T_01/27/94	59.400			

SUMMARY STATISTICS FOR THE BENNINGTON SITE - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-BACKGROUND BEDROCK GW - FILTERED -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	1	4	12.6000	12.6000	B-4-3D_6/11/93	18.000	28.600	55.000
	ANTIMONY	1	4	3.0000	3.0000	B-4-3D_11/4/93	3.250	2.000	9.000
	BARIUM	4	4	13.2000	18.4000	B-4-3D_11/4/93	16.425	.	.
	CALCIUM	4	4	7760.0000	12000.0000	B-4-3D_01/27/94	9565.000	.	.
	COBALT	1	4	3.0000	3.0000	B-4-3D_4/29/93	1.875	2.000	4.000
	IRON	1	4	13.6000	13.6000	B-4-3D_11/4/93	16.038	11.900	59.300
	LEAD	1	4	1.0000	1.0000	B-4-3D_11/4/93	1.125	2.000	7.000
	MAGNESIUM	4	4	2670.0000	3140.0000	B-4-3D_01/27/94	2897.500	.	.
	MANGANESE	4	4	6.3000	133.0000	B-4-3D_01/27/94	58.825	.	.
	MERCURY	1	4	0.2000	0.2000	B-4-3D_11/4/93	0.165	0.040	0.200
	NICKEL	1	4	6.7000	6.7000	B-4-3D_4/29/93	4.425	5.000	9.000
	POTASSIUM	4	4	1090.0000	1360.0000	B-4-3D_4/29/93	1202.500	.	.
	SODIUM	4	4	3000.0000	4670.0000	B-4-3D_4/29/93	3687.500	.	.
	THALLIUM	1	4	2.0000	2.0000	B-4-3D_11/4/93	2.375	3.000	6.000
	ZINC	1	4	30.2000	30.2000	B-4-3D_11/4/93	10.413	6.900	30.000

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE-BACKGROUND SURFACE SOIL-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	1,1,1-TRICHLOROETHANE	1	3	9.0000	9.0000	BGS-01R(0-1')_9/28/92	7.333	12.000	14.000
BNA's	2,4-DIMETHYLPHENOL	1	3	57.0000	57.0000	BGS-03(0-1')_9/28/92	155.667	400.000	420.000
	BIS(2-ETHYLHEXYL) PHTHALATE	3	3	40.0000	60.0000	BGS-03(0-1')_9/28/92	47.333	.	.
	DI-N-BUTYLPHTHALATE	1	3	40.0000	40.0000	BGS-01(0-1')_9/28/92	160.000	420.000	460.000
pest/PCBs	4,4'-DDE	1	3	1.1000	1.1000	BGS-02(0-1')_9/28/92	1.883	4.500	4.600
	DIELDRIN	2	3	0.0720	0.6900	BGS-01(0-1')_9/28/92	1.021	4.600	4.600
	ENDOSULFAN II	1	3	0.4500	0.4500	BGS-01(0-1')_9/28/92	1.617	4.200	4.600
	ENDOSULFAN SULFATE	1	3	0.1200	0.1200	BGS-01(0-1')_9/28/92	1.507	4.200	4.600
	ENDRIN	1	3	0.3000	0.3000	BGS-02(0-1')_9/28/92	1.533	4.000	4.600
	HEPTACHLOR EPOXIDE	2	3	0.0570	0.1800	BGS-01(0-1')_9/28/92	0.462	2.300	2.300
Inor.	ALUMINUM	3	3	3980.0000	8430.0000	BGS-03(0-1')_9/28/92	6313.333	.	.
	ARSENIC	3	3	2.7000	4.9000	BGS-03(0-1')_9/28/92	3.767	.	.
	BARIUM	3	3	43.1000	370.0000	BGS-03(0-1')_9/28/92	155.633	.	.
	CALCIUM	3	3	169.0000	15700.0000	BGS-03(0-1')_9/28/92	5559.667	.	.
	CHROMIUM	3	3	4.5000	10.2000	BGS-03(0-1')_9/28/92	7.400	.	.
	COBALT	3	3	10.2000	18.0000	BGS-02(0-1')_9/28/92	14.833	.	.
	COPPER	3	3	6.7000	15.5000	BGS-03(0-1')_9/28/92	11.833	.	.
	CYANIDE	1	3	0.5000	0.5000	BGS-03(0-1')_9/28/92	0.187	0.060	0.060
	IRON	3	3	11400.0000	21800.0000	BGS-03(0-1')_9/28/92	17000.000	.	.
	MAGNESIUM	3	3	243.0000	5890.0000	BGS-03(0-1')_9/28/92	2497.667	.	.
	MANGANESE	3	3	626.0000	5930.0000	BGS-03(0-1')_9/28/92	2406.000	.	.
	MERCURY	1	3	0.0900	0.0900	BGS-03(0-1')_9/28/92	0.050	0.060	0.060
	NICKEL	3	3	5.6000	14.4000	BGS-03(0-1')_9/28/92	10.067	.	.
	POTASSIUM	3	3	401.0000	541.0000	BGS-03(0-1')_9/28/92	472.000	.	.
	SILVER	1	3	0.7100	0.7100	BGS-03(0-1')_9/28/92	0.400	0.480	0.500
	SODIUM	3	3	10.9000	39.6000	BGS-03(0-1')_9/28/92	23.867	.	.
	VANADIUM	3	3	9.0000	14.7000	BGS-03(0-1')_9/28/92	11.233	.	.
	ZINC	3	3	24.9000	74.9000	BGS-03(0-1')_9/28/92	47.067	.	.

SUMMARY STATISTICS OR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=BACKGROUND SUBSURFACE SOILS -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
BNAs	BIS(2-ETHYLHEXYL)PHTHALATE	3	3	34.0000	45.0000	BGS-02(2-3')_9/28/92	40.000	.	.
	DI-N-BUTYLPHthalATE	1	3	35.0000	35.0000	BGS-01(2-3')_9/28/92	136.667	370.000	380.000
Pest/PCBs	4,4'-DDE	1	3	0.3900	0.3900	BGS-01(2-3')_9/28/92	1.380	3.700	3.800
	DIELDRIN	1	3	0.1000	0.1000	BGS-01(2-3')_9/28/92	1.283	3.700	3.800
	ENDRIN	1	3	0.0720	0.0720	BGS-01(2-3')_9/28/92	1.274	3.700	3.800
Inor.	ALUMINUM	3	3	3070.0000	8980.0000	BGS-02(2-3')_9/28/92	5436.667	.	.
	ARSENIC	3	3	2.3000	4.3000	BGS-03(2-3')_9/28/92	3.433	.	.
	BARIUM	3	3	33.8000	81.8000	BGS-01(2-3')_9/28/92	55.700	.	.
	CALCIUM	3	3	236.0000	1490.0000	BGS-03(2-3')_9/28/92	656.667	.	.
	CHROMIUM	3	3	5.9000	12.4000	BGS-02(2-3')_9/28/92	8.767	.	.
	COBALT	3	3	15.3000	21.1000	BGS-02(2-3')_9/28/92	18.667	.	.
	COPPER	3	3	6.1000	24.8000	BGS-02(2-3')_9/28/92	14.467	.	.
	IRON	3	3	10900.0000	25600.0000	BGS-02(2-3')_9/28/92	18000.000	.	.
	LEAD	1	3	8.9000	8.9000	BGS-03(2-3')_9/28/92	6.767	8.500	14.300
	MAGNESIUM	3	3	360.0000	2250.0000	BGS-02(2-3')_9/28/92	1253.333	.	.
	MANGANESE	3	3	691.0000	756.0000	BGS-03(2-3')_9/28/92	731.000	.	.
	NICKEL	3	3	7.8000	18.2000	BGS-02(2-3')_9/28/92	11.867	.	.
	POTASSIUM	3	3	199.0000	686.0000	BGS-02(2-3')_9/28/92	426.000	.	.
	SODIUM	3	3	20.2000	24.3000	BGS-02(2-3')_9/28/92	22.667	.	.
VANADIUM	3	3	6.1000	12.6000	BGS-02(2-3')_9/28/92	9.233	.	.	
ZINC	3	3	18.8000	50.6000	BGS-02(2-3')_9/28/92	33.667	.	.	

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE=BACKGROUND SEDIMENTS-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	METHYLENE CHLORIDE	1	2	17.0000	17.0000	BGSED-01(0-6'')_9/28/92	12.500	16.000	16.000
	TOLUENE	1	2	28.0000	28.0000	BGSED-01(0-6'')_9/28/92	18.000	16.000	16.000
Pest/PCBs	4,4'-DDE	1	2	0.1500	0.1500	BGSED-01(0-6'')_9/28/92	1.425	5.400	5.400
	4,4'-DDT	1	2	0.9700	0.9700	BGSED-02(0-6'')_9/28/92	1.910	5.700	5.700
	DIELDRIN	1	2	0.3500	0.3500	BGSED-02(0-6'')_9/28/92	1.600	5.700	5.700
	ENDOSULFAN II	1	2	0.1100	0.1100	BGSED-02(0-6'')_9/28/92	1.480	5.700	5.700
	ENDRIN	1	2	0.2500	0.2500	BGSED-02(0-6'')_9/28/92	1.550	5.700	5.700
	GAMMA-BHC (LINDANE)	1	2	0.0820	0.0820	BGSED-02(0-6'')_9/28/92	0.766	2.900	2.900
Inor.	ALUMINUM	2	2	7120.0000	16000.0000	BGSED-01(0-6'')_9/28/92	11560.000	.	.
	ANTIMONY	1	2	4.7000	4.7000	BGSED-01(0-6'')_9/28/92	3.250	3.600	3.600
	ARSENIC	1	2	4.2000	4.2000	BGSED-01(0-6'')_9/28/92	2.425	1.300	1.300
	BARIUM	2	2	61.0000	105.0000	BGSED-01(0-6'')_9/28/92	83.000	.	.
	CADMIUM	1	2	2.0000	2.0000	BGSED-01(0-6'')_9/28/92	1.400	1.600	1.600
	CALCIUM	2	2	4250.0000	10200.0000	BGSED-01(0-6'')_9/28/92	7225.000	.	.
	CHROMIUM	2	2	12.3000	19.9000	BGSED-01(0-6'')_9/28/92	16.100	.	.
	COBALT	2	2	5.7000	12.9000	BGSED-01(0-6'')_9/28/92	9.300	.	.
	COPPER	2	2	6.5000	17.1000	BGSED-01(0-6'')_9/28/92	11.800	.	.
	IRON	2	2	13500.0000	27200.0000	BGSED-01(0-6'')_9/28/92	20350.000	.	.
	LEAD	1	2	14.4000	14.4000	BGSED-01(0-6'')_9/28/92	7.362	0.650	0.650
	MAGNESIUM	2	2	1750.0000	3920.0000	BGSED-01(0-6'')_9/28/92	2835.000	.	.
	MANGANESE	2	2	566.0000	754.0000	BGSED-01(0-6'')_9/28/92	660.000	.	.
	MERCURY	2	2	0.0900	0.1500	BGSED-01(0-6'')_9/28/92	0.120	.	.
	NICKEL	2	2	11.7000	19.0000	BGSED-01(0-6'')_9/28/92	15.350	.	.
	POTASSIUM	2	2	416.0000	753.0000	BGSED-01(0-6'')_9/28/92	584.500	.	.
	SODIUM	1	2	1600.0000	1600.0000	BGSED-01(0-6'')_9/28/92	802.600	10.400	10.400
	VANADIUM	2	2	12.3000	26.2000	BGSED-01(0-6'')_9/28/92	19.250	.	.
	ZINC	2	2	40.7000	75.3000	BGSED-01(0-6'')_9/28/92	58.000	.	.

SUMMARY STATISTICS AT THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=BACKGROUND SURFACE WATER -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Pest/PCBs	4,4'-DDT	1	2	0.0310	0.0310	BGSWAT-02_5/26/93	0.041	0.100	0.100
	ALDRIN	1	2	0.0010	0.0010	BGSWAT-02_5/26/93	0.013	0.050	0.050
	DIELDRIN	1	2	0.0070	0.0070	BGSWAT-02_5/26/93	0.029	0.100	0.100
	ENDRIN	1	2	0.0070	0.0070	BGSWAT-02_5/26/93	0.029	0.100	0.100
	GAMMA-BHC (LINDANE)	1	2	0.0030	0.0030	BGSWAT-02_5/26/93	0.014	0.050	0.050
	HEPTACHLOR	1	1	0.0030	0.0030	BGSWAT-02_5/26/93	0.003	.	.
Inor.	ALUMINUM	1	2	1740.0000	1740.0000	BGSWAT-02_5/26/93	871.750	7.000	7.000
	BARIUM	2	2	16.0000	35.6000	BGSWAT-02_5/26/93	25.800	.	.
	CALCIUM	2	2	26100.0000	69300.0000	BGSWAT-01_5/26/93	47700.000	.	.
	IRON	2	2	72.8000	2190.0000	BGSWAT-02_5/26/93	1131.400	.	.
	LEAD	1	2	5.8000	5.8000	BGSWAT-02_5/26/93	3.650	3.000	3.000
	MAGNESIUM	2	2	11500.0000	17100.0000	BGSWAT-01_5/26/93	14300.000	.	.
	MANGANESE	2	2	32.4000	230.0000	BGSWAT-02_5/26/93	131.200	.	.
	POTASSIUM	2	2	794.0000	1520.0000	BGSWAT-01_5/26/93	1157.000	.	.
	SODIUM	2	2	708.0000	10500.0000	BGSWAT-01_5/26/93	9604.000	.	.
	ZINC	2	2	7.6000	12.0000	BGSWAT-02_5/26/93	9.800	.	.

SUMMARY STATISTICS FOR THE BENNINGTON ( - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL .LTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=GROUND WATER/OVERBURDEN -----										
Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	1,1,1-TRICHLOROETHANE	5	55	200.0000	660.0000	B-6-1_05/17/94	43.473	1.000	10.000	
	1,1-DICHLOROETHANE	19	56	0.9000	1800.0000	B-6-1_4/30/93	132.766	1.000	10.000	
	1,1-DICHLOROETHENE	3	55	4.0000	30.0000	B-6-1_05/17/94	5.073	2.000	200.000	
	1,2-DICHLOROETHANE	1	55	0.9000	0.9000	B-5-2_05/16/94	4.407	1.000	200.000	
	1,2-DICHLOROETHENE (TOTAL)	8	55	0.6000	4050.0000	B-6-1_4/30/93	192.267	1.000	10.000	
	1,2-DICHLOROPROPANE	1	55	1.0000	1.0000	B-14_05/20/94	4.409	1.000	200.000	
	2-BUTANONE	2	55	4.0000	6.0000	B-5-1_6/8/93	7.045	5.000	200.000	
	ACETONE	14	55	2.0000	180.0000	B-5-1_4/27/93	13.823	5.000	200.000	
	BENZENE	14	55	0.8000	25.0000	B-6-1_4/30/93	5.315	1.000	200.000	
	CARBON DISULFIDE	2	55	1.0000	1.0000	B-1-2_01/24/94	4.336	1.000	200.000	
	CHLOROETHANE	10	55	1.0000	7.0000	B-14_05/20/94	4.491	1.000	200.000	
	CHLOROBENZENE	21	55	2.0000	150.0000	B-14_05/20/94	16.673	1.000	200.000	
	ETHYLBENZENE	5	55	0.5500	200.0000	B-6-IDL_6/9/93	6.901	1.000	50.000	
	METHYLBNE CHLORIDE	11	55	1.0000	180.0000	B-6-1_4/30/93	12.986	1.000	150.000	
	TETRACHLOROETHENE	5	55	0.7000	70.0000	B-6-1_05/17/94	6.104	1.000	50.000	
	TOLUENE	6	55	4.5000	1650.0000	B-6-1_4/30/93	56.309	1.000	50.000	
	TRICHLOROETHENE	4	55	7.0000	53.0000	B-6-1_4/30/93	6.045	1.000	200.000	
	VINYL CHLORIDE	7	55	0.7000	95.0000	B-14_05/20/94	8.398	1.000	200.000	
	XYLENE (TOTAL)	2	41	1.0000	49.0000	B-6-1_4/30/93	6.817	1.000	200.000	
	BNA	1,2,4-TRIMETHYLBENZENE	2	34	16.0000	20.0000	B-14_05/20/94	2.265	1.000	50.000
		1,2-DICHLOROETHENE	2	55	0.5000	3.0000	B-14_05/20/94	2.355	1.000	10.000
		1,3,5-TRIMETHYLBENZENE	2	34	5.0000	12.0000	B-6-1_05/17/94	1.706	1.000	50.000
		1,4-DICHLOROETHENE	8	55	0.6000	2.0000	B-14_05/20/94	2.260	1.000	10.000
		2-CHLOROTOLUENE	1	34	1.0000	1.0000	B-6-1_05/17/94	1.250	1.000	50.000
		2-METHYLPHENOL	3	45	7.0000	62.5000	B-6-1_4/30/93	7.233	10.000	10.000
		4-CHLORO-3-METHYLPHENOL	1	45	5.0000	5.0000	B-14_05/20/94	5.000	10.000	10.000
		4-ISOPROPYLTOLUENE	2	34	1.0000	2.0000	B-14_05/20/94	1.294	1.000	50.000
		4-METHYLPHENOL	3	45	32.0000	115.0000	B-6-1_4/30/93	8.867	10.000	10.000
		BIS(2-ETHYLHEXYL) PHTHALATE	6	45	1.0000	3.0000	B-14_05/20/94	5.122	6.000	28.000
		DI-N-BUTYLPHTHALATE	4	45	1.0000	1.0000	B-1-1_4/26/92	4.072	1.000	10.000
		DIMETHYLPHTHALATE	1	45	7.0000	7.0000	B-14_05/20/94	4.967	3.000	10.000
		ISOPROPYLBENZENE	2	34	1.0000	2.0000	B-14_05/20/94	1.294	1.000	50.000
		N-PROPYLBENZENE	2	34	1.0000	2.0000	B-6-1_05/17/94	1.294	1.000	50.000
		NAPHTHALENE	1	55	7.0000	7.0000	B-14_05/20/94	2.427	1.000	10.000
		PHENOL	2	45	4.0000	10.0000	B-5-1_4/27/93	5.089	10.000	10.000
SEC-BUTYLBENZENE		2	34	0.5000	0.9000	B-6-1_05/17/94	1.247	1.000	50.000	
Pest/PCBs		4,4'-DDD	2	44	0.0040	0.0100	B-17_05/18/94	0.047	0.010	0.100
		4,4'-DDT	3	43	0.0040	0.0190	B-5-2_11/2/93	0.032	0.004	0.100
		ALDRIN	3	43	0.0010	0.0020	B-17_05/18/94	0.023	0.050	0.050
	AROCLOL 1221	10	51	0.5600	7.3000	B-5-2U_05/16/94	1.122	0.500	2.000	
	DIBLDIN	6	43	0.0010	0.0100	B-12_6/9/93	0.041	0.003	0.100	
	ENDOSULFAN II	2	43	0.0080	0.0090	B-15_05/18/94	0.045	0.003	0.100	
	ENDOSULFAN SULFATE	1	43	0.0050	0.0050	B-15_05/18/94	0.045	0.002	0.100	
	ENDRIN	3	43	0.0010	0.0040	B-6-1_11/2/93	0.043	0.001	0.100	
	ENDRIN ALDEHYDE	2	42	0.0050	0.0340	PZ-SOL_4/30/93	0.048	0.050	0.100	
	ENDRIN KETONE	1	42	0.0010	0.0010	B-12_6/9/93	0.054	0.100	0.500	
	GAMMA-BHC (LINDANE)	1	43	0.0010	0.0010	B-6-1_11/2/93	0.023	0.003	0.050	
	GAMMA-CHLORDANE	1	21	0.0020	0.0020	PZ-SOL_4/30/93	0.142	0.050	5.000	
	HEPTACHLOR	5	37	0.0020	0.0050	B-1-2_4/26/92	0.017	0.001	0.050	
	Inor.	ALUMINUM	40	44	114.0000	102000.000	B-7-1T_01/26/94	11476.952	44.300	351.000
		ARSENIC	27	38	1.2000	17.1000	B-5-1T_6/8/93	5.033	2.000	4.000
BARIUM		42	43	26.7000	4270.0000	B-5-2T_01/25/94	845.327	24.100	24.100	

SUMMARY STATISTICS FOR THE BENNINGTON 3 - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOLIDS. RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-GROUND WATER/OVERBURDEN -----  
 (continued)

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
	BERYLLIUM	10	44	1.3000	5.4000	B-16T_05/18/94	1.023	1.000	1.000
	CALCIUM	44	44	39100.0000	2350000.00	B-7-1T_01/26/94	260768.182	.	.
	CHROMIUM	21	44	7.1000	145.0000	B-16T_05/18/94	24.849	7.000	10.000
	COBALT	40	44	6.5000	290.0000	B-5-1T_01/25/94	46.843	2.000	3.000
	COPPER	34	44	3.0000	322.0000	B-5-1T_01/25/94	37.382	3.000	3.000
	CYANIDE	10	44	2.0000	5.0000	B-14T_05/20/94	1.674	2.000	5.000
	IRON	44	44	586.0000	286000.000	B-5-1T_01/25/94	40382.114	.	.
	LEAD	26	44	1.0000	120.0000	B-5-1T_01/25/94	15.580	1.000	3.000
	MAGNESIUM	44	44	20100.0000	1020000.00	B-7-1T_01/26/94	100425.000	.	.
	MANGANESE	43	43	78.6000	23000.0000	B-14T_05/20/94	2750.653	.	.
	MERCURY	18	44	0.0500	0.5200	B-6-1T_11/2/93	0.114	0.040	0.200
	NICKEL	32	44	6.2000	247.0000	B-5-1T_01/25/94	38.931	5.000	9.000
	POTASSIUM	44	44	677.0000	37800.0000	B-5-1T_01/25/94	8937.114	.	.
	SODIUM	44	44	1130.0000	975000.000	B-1-1T_01/24/94	45880.341	.	.
	VANADIUM	27	44	2.7000	143.0000	B-7-1T_01/26/94	19.880	3.000	3.000
	ZINC	26	44	3.1000	614.0000	B-7-1T_01/26/94	76.840	2.000	140.000

SUMMARY STATISTICS FOR THE BENNINGTON ( - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL . ULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-GROUND WATER/OVERBURDEN - FILTERED -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Peat/PCBs	AROCLOL 1221	5	7	0.7250	8.1000	B-5-2F_05/16/94	2.332	0.500	0.500
Inor.	ALUMINUM	7	44	7.1000	32.0000	B-6-1D_01/26/94	12.703	7.000	55.000
	ANTIMONY	6	44	3.0000	3.2000	B-6-1D_11/2/93	3.005	2.000	10.000
	ARSENIC	27	44	1.0000	18.5000	B-2-2D_11/4/93	5.091	1.000	4.000
	BARIUM	43	43	11.0000	3700.0000	B-5-2D_01/25/94	716.777	.	.
	CALCIUM	43	44	17100.0000	165000.0000	B-6-1D_01/26/94	105965.909	73200.000	73200.000
	CHROMIUM	3	44	7.0000	8.1000	B-1-2D_11/1/93	4.216	7.000	10.000
	COBALT	29	44	3.0000	84.7000	B-5-2D_01/25/94	18.830	2.000	17.500
	COPPER	1	44	3.2000	3.2000	B-1-2D_4/26/92	1.785	3.000	11.150
	IRON	30	44	4.6000	17400.0000	B-5-2D_4/27/93	4286.251	5.000	135.000
	LEAD	7	44	1.0000	2.1000	B-2-2D_01/24/94	1.048	1.000	3.000
	MAGNESIUM	44	44	5630.0000	50300.0000	B-12D_01/25/94	32930.227	.	.
	MANGANESE	36	43	2.0000	21600.0000	B-14D_05/20/94	1277.598	1.000	5.000
	MERCURY	14	44	0.0400	0.3600	B-12D_01/25/94	0.092	0.040	0.200
	NICKEL	17	44	5.5000	56.5000	B-14D_05/20/94	10.322	5.000	14.700
	POTASSIUM	44	44	599.0000	34100.0000	B-5-2D_4/27/93	7518.977	.	.
	SELENIUM	4	44	2.0000	10.0000	B-5-1D_11/2/93	1.386	1.000	5.000
	SODIUM	43	44	1650.0000	70200.0000	B-5-2D_4/27/93	24141.841	982.000	982.000
	THALLIUM	1	44	10.0000	10.0000	B-2-2D_11/4/93	2.545	2.000	15.000
	VANADIUM	2	44	2.0000	3.3000	B-7-1D_11/4/93	1.507	2.000	4.000
	ZINC	7	44	2.4000	64.8000	B-1-1D_01/24/94	4.649	2.000	21.700

SUMMARY STATISTICS FOR THE BEYTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC ILL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE-OVERBURDEN PLUME (Wells B-2, B-5, B-6, B-14, and B-15)-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	1,1,1-TRICHLOROETHANE	5	27	200.0000	660.0000	B-6-1_05/17/94	86.204	1.000	10.000	
	1,1-DICHLOROETHANE	19	28	0.9000	1800.0000	B-6-1_4/30/93	263.264	1.000	10.000	
	1,1-DICHLOROETHENE	3	27	4.0000	30.0000	B-6-1_05/17/94	7.981	1.000	200.000	
	1,2-DICHLOROETHANE	1	27	0.9000	0.9000	B-5-2_05/16/94	6.626	1.000	200.000	
	1,2-DICHLOROETHENE (TOTAL)	8	27	0.6000	4050.0000	B-6-1_4/30/93	389.304	1.000	10.000	
	1,2-DICHLOROPROPANE	1	27	1.0000	1.0000	B-14_05/20/94	6.630	1.000	200.000	
	2-BUTANONE	2	27	4.0000	6.0000	B-5-1_6/8/93	10.741	5.000	200.000	
	ACETONE	8	27	3.0000	180.0000	B-5-1_4/27/93	22.102	5.000	200.000	
	BENZENE	14	27	0.8000	25.0000	B-6-1_4/30/93	8.474	1.000	200.000	
	CHLOROBENZENE	10	27	1.0000	7.0000	B-14_05/20/94	6.796	1.000	200.000	
	CHLOROETHANE	21	27	2.0000	150.0000	B-14_05/20/94	31.611	1.000	200.000	
	ETHYLBENZENE	5	27	0.5500	200.0000	B-6-IDL_6/9/93	11.706	1.000	50.000	
	METHYLENE CHLORIDE	10	27	1.0000	180.0000	B-6-1_4/30/93	25.250	1.000	150.000	
	TETRACHLOROETHENE	5	27	0.7000	70.0000	B-6-1_05/17/94	10.081	1.000	50.000	
	TOLUENE	6	27	4.5000	1650.0000	B-6-1_4/30/93	112.352	1.000	50.000	
	TRICHLOROETHENE	4	27	7.0000	53.0000	B-6-1_4/30/93	9.963	1.000	200.000	
	VINYL CHLORIDE	7	27	0.7000	95.0000	B-14_05/20/94	14.756	1.000	200.000	
	XYLENE (TOTAL)	2	20	1.0000	49.0000	B-6-1_4/30/93	10.975	1.000	200.000	
	BNAs	1,2,4-TRIMETHYLBENZENE	2	17	16.0000	20.0000	B-14_05/20/94	4.029	1.000	50.000
		1,2-DICHLOROBENZENE	2	27	0.5000	3.0000	B-14_05/20/94	2.444	1.000	10.000
		1,3,5-TRIMETHYLBENZENE	2	17	5.0000	12.0000	B-6-1_05/17/94	2.912	1.000	50.000
		1,4-DICHLOROBENZENE	8	27	0.6000	2.0000	B-14_05/20/94	2.252	1.000	10.000
		2-CHLOROTOLUENE	1	17	1.0000	1.0000	B-6-1_05/17/94	2.000	1.000	50.000
		2-METHYLPHENOL	2	22	46.0000	62.5000	B-6-1_4/30/93	9.477	10.000	10.000
		4-CHLORO-3-METHYLPHENOL	1	22	5.0000	5.0000	B-14_05/20/94	5.000	10.000	10.000
		4-ISOPROPYLTOLUENE	2	17	1.0000	2.0000	B-14_05/20/94	2.088	1.000	50.000
		4-METHYLPHENOL	3	22	32.0000	115.0000	B-6-1_4/30/93	12.909	10.000	10.000
		BIS(2-ETHYLHEXYL)PHTHALATE	5	22	1.0000	3.0000	B-14_05/20/94	4.864	10.000	21.000
		DI-N-BUTYLPHthalate	2	22	1.0000	1.0000	B-5-2_4/27/93	4.443	1.500	10.000
		DIETHYLPHthalate	1	22	7.0000	7.0000	B-14_05/20/94	5.091	10.000	10.000
		ISOPROPYLBENZENE	2	17	1.0000	2.0000	B-14_05/20/94	2.088	1.000	50.000
		N-PROPYLBENZENE	2	17	1.0000	2.0000	B-6-1_05/17/94	2.088	1.000	50.000
		NAFTHALENE	1	27	7.0000	7.0000	B-14_05/20/94	2.593	1.000	10.000
PHENOL		1	22	10.0000	10.0000	B-5-1_4/27/93	5.227	10.000	10.000	
SEC-BUTYLBENZENE		2	17	0.5000	0.9000	B-6-1_05/17/94	1.994	1.000	50.000	
Pest/PCBs		4,4'-DDT	2	21	0.0080	0.0190	B-5-2_11/2/93	0.031	0.004	0.100
		ALDRIN	1	22	0.0010	0.0010	B-6-1_11/2/93	0.024	0.050	0.050
		AROCLOR 1221	9	26	0.5600	7.3000	B-5-2U_05/16/94	1.577	0.500	2.000
		DIELDRIN	3	22	0.0020	0.0050	B-5-2_11/2/93	0.041	0.003	0.100
		ENDOSULFAN II	1	22	0.0090	0.0090	B-15_05/18/94	0.046	0.005	0.100
		ENDOSULFAN SULFATE	1	22	0.0050	0.0050	B-15_05/18/94	0.046	0.002	0.100
	ENDRIN	3	22	0.0010	0.0040	B-6-1_11/2/93	0.041	0.002	0.100	
	ENDRIN ALDEHYDE	1	22	0.0050	0.0050	B-14_05/20/94	0.047	0.050	0.100	
	GAMMA-BHC (LINDANE)	1	21	0.0010	0.0010	B-6-1_11/2/93	0.024	0.050	0.050	
	HEPTACHLOR	3	17	0.0020	0.0040	B-5-2_11/2/93	0.020	0.002	0.050	
	Inor.	ALUMINUM	20	22	114.0000	74000.0000	B-5-1T_01/25/94	9105.461	44.300	351.000
		ARSENIC	19	21	1.6000	17.1000	B-5-1T_6/8/93	7.671	2.000	3.000
		BARIUM	21	21	130.0000	4270.0000	B-5-2T_01/25/94	1506.333	.	.
		BERYLLIUM	5	22	1.3000	4.6000	B-5-1T_01/25/94	0.959	1.000	1.000
		CALCIUM	22	22	84200.0000	1210000.00	B-5-1T_01/25/94	213890.909	.	.
		CHROMIUM	10	22	11.3000	110.0000	B-5-1T_01/25/94	23.743	7.000	10.000
		COBALT	21	22	6.8000	290.0000	B-5-1T_01/25/94	67.782	2.000	2.000

SUMMARY STATISTICS FOR THE BEN (ON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC (RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=OVERBURDEN PLUME (Wells B-2, B-5, B-6, B-14, and B-15)-----  
 (continued)

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
	COPPER	17	22	3.0000	322.0000	B-5-1T_01/25/94	43.159	3.000	3.000
	CYANIDE	8	22	2.0000	5.0000	B-14T_05/20/94	1.982	2.000	4.700
	IRON	22	22	586.0000	286000.0000	B-5-1T_01/25/94	41741.636	.	.
	LEAD	15	22	1.0000	120.0000	B-5-1T_01/25/94	20.905	2.000	3.000
	MAGNESIUM	22	22	23500.0000	583000.0000	B-5-1T_01/25/94	82559.091	.	.
	MANGANESE	21	21	147.0000	23000.0000	B-14T_05/20/94	3658.500	.	.
	MERCURY	9	22	0.0500	0.5200	B-6-1T_11/2/93	0.115	0.040	0.200
	NICKEL	18	22	9.9000	247.0000	B-5-1T_01/25/94	49.332	5.000	9.000
	POTASSIUM	22	22	2000.0000	37800.0000	B-5-1T_01/25/94	13810.909	.	.
	SODIUM	22	22	3200.0000	71100.0000	B-5-2T_01/25/94	39050.227	.	.
	VANADIUM	13	22	2.7000	138.0000	B-5-1T_01/25/94	17.773	3.000	3.000
	ZINC	15	22	3.1000	490.0000	B-5-1T_01/25/94	64.369	2.000	140.000

SUMMARY STATISTICS FOR THE BENNINGTON I - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE-GROUND WATER/BEDROCK-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	1,1,1-TRICHLOROETHANE	4	15	1.0000	2.0000	B-7-3_4/29/93	2.000	1.000	10.000	
	1,1-DICHLOROETHANE	4	15	7.0000	8.0000	B-7-3_11/3/93	3.800	1.000	10.000	
	1,2-DICHLOROETHENE (TOTAL)	5	15	2.0000	3.0000	B-7-3_6/10/93	2.360	1.000	10.000	
	ACETONE	1	15	5.0000	5.0000	B-7-3_05/19/94	3.833	5.000	10.000	
	BENZENE	5	15	3.0000	5.0000	B-7-3_11/3/93	2.867	1.000	10.000	
	CHLOROETHANE	3	15	9.0000	10.0000	B-7-3_11/3/93	4.067	1.000	10.000	
	CHLOROFORM	6	15	0.8000	2.0000	B-2-3_4/30/93	1.753	1.000	10.000	
	DICHLORODIFLUOROMETHANE	4	9	0.9000	40.0000	B-7-3_11/3/93	6.211	1.000	1.000	
	METHYLENE CHLORIDE	3	15	2.0000	3.0000	B-2-3_6/9/93	1.233	1.000	4.000	
	TETRACHLOROETHENE	5	15	2.0000	4.0000	B-7-3_6/10/93	2.467	1.000	10.000	
	TOLUENE	1	15	1.0000	1.0000	B-2-3_4/30/93	2.067	1.000	10.000	
	TRICHLOROETHENE	6	15	1.0000	4.0000	B-2-3_4/30/93	1.967	1.000	10.000	
	VINYL CHLORIDE	1	15	1.0000	1.0000	B-7-3_01/29/94	2.367	1.000	10.000	
	BNAs	1,4-DICHLOROBENZENE	1	15	1.0000	1.0000	B-7-3_01/29/94	2.367	1.000	10.000
		BIS(2-ETHYLHEXYL)PHTHALATE	3	12	1.0000	28.0000	B-7-3_4/29/93	7.708	7.000	10.000
		DI-N-OCTYLPHTHALATE	2	12	16.0000	21.0000	B-2-3_4/30/93	7.250	10.000	10.000
		DIBTHYLPHTHALATE	3	12	3.0000	4.0000	B-7-3_6/10/93	4.625	10.000	10.000
	Pest/PCBs	PHENOL	2	12	14.0000	17.0000	B-7-3_4/29/93	6.750	10.000	10.000
		DELTA-BHC	1	10	0.0030	0.0030	B-6-3_4/28/93	0.018	0.001	0.050
		ENDOSULFAN I	1	11	0.0040	0.0040	B-7-3_4/29/93	0.023	0.050	0.050
ENDOSULFAN II		1	12	0.0020	0.0020	B-7-3_6/10/93	0.046	0.100	0.100	
Inor.	HEPTACHLOR EPOXIDE	2	12	0.0010	0.0020	B-7-3_4/29/93	0.021	0.050	0.050	
	ALUMINUM	8	12	81.4000	3980.0000	B-6-3T_01/29/94	508.467	12.000	55.000	
	ANTIMONY	1	10	2.0000	2.0000	B-7-3T_01/29/94	3.250	2.000	9.000	
	BARIUM	12	12	30.0000	292.0000	B-6-3T_01/29/94	96.446	-	-	
	BERYLLIUM	1	12	1.6000	1.6000	B-6-3T_01/29/94	0.592	1.000	1.000	
	CALCIUM	12	12	42600.0000	124500.0000	B-7-3T_01/29/94	77270.833	-	-	
	CHROMIUM	7	12	10.3000	29.5000	B-7-3T_4/29/93	10.825	7.000	10.000	
	COBALT	2	12	3.6000	7.3000	B-6-3T_01/29/94	2.063	2.000	4.000	
	COPPER	4	12	4.0000	15.2000	B-7-3T_4/29/93	3.917	3.000	3.000	
	CYANIDE	2	12	4.2000	11.0000	B-7-3T_01/29/94	2.979	2.000	9.000	
	IRON	10	12	48.9000	21300.0000	B-6-3T_01/29/94	2144.944	25.450	33.400	
	LEAD	3	12	1.0000	9.1000	B-6-3T_01/29/94	1.917	1.000	3.000	
	MAGNESIUM	12	12	19850.0000	59800.0000	B-6-3T_01/29/94	33825.000	-	-	
	MANGANESE	12	12	15.2000	1460.0000	B-6-3T_01/29/94	219.233	-	-	
	MERCURY	5	12	0.0500	0.2000	B-2-3T_11/4/93	0.118	0.040	0.300	
	NICKEL	8	12	6.6000	25.8000	B-6-3T_01/29/94	9.208	5.000	9.000	
	POTASSIUM	12	12	731.0000	1410.0000	B-6-3T_01/29/94	972.042	-	-	
	SODIUM	11	12	1780.0000	13100.0000	B-6-3T_4/28/93	4762.917	4120.000	4120.000	
	THALLIUM	3	10	2.0000	4.0000	B-6-3T_01/29/94	2.430	2.000	6.000	
	VANADIUM	3	12	3.4000	5.8000	B-6-3T_6/10/93	2.075	2.000	3.000	
ZINC	5	12	22.3000	93.4000	B-6-3T_01/29/94	20.946	3.600	39.600		

SUMMARY STATISTICS FOR THE BENNINGTON ( - PHASE 1A AND 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-GROUND WATER/BEDROCK - FILTERED -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	4	12	92.1000	299.0000	B-6-3D_6/10/93	56.883	7.000	55.000
	ANTIMONY	4	12	3.0000	13.7000	B-6-3D_4/28/93	4.508	2.000	9.000
	ARSENIC	2	12	3.0000	3.0000	B-6-3D_11/3/93	1.583	1.000	4.000
	BARIUM	10	12	19.2000	124.0000	B-6-3D_6/10/93	64.710	32.050	68.600
	CALCIUM	12	12	40600.0000	118000.000	B-7-3D_01/29/94	71383.333	.	.
	CHROMIUM	1	12	11.9000	11.9000	B-6-3D_6/10/93	4.575	7.000	10.000
	COPPER	1	12	4.1000	4.1000	B-7-3D_4/29/93	1.717	3.000	3.000
	IRON	7	12	40.1000	1460.0000	B-6-3D_6/10/93	204.473	7.650	122.000
	LEAD	3	12	1.0000	1.0000	B-2-3D_11/4/93	1.125	2.000	3.000
	MAGNESIUM	12	12	18450.0000	280000.000	B-6-3D_6/10/93	50954.167	.	.
	MANGANESE	11	12	2.3000	152.0000	B-6-3D_6/10/93	54.521	2.000	2.000
	MERCURY	3	12	0.2000	0.2000	B-2-3D_11/4/93	0.105	0.040	0.200
	NICKEL	4	12	5.9000	12.7000	B-6-3D_6/10/93	5.300	5.000	9.000
	POTASSIUM	12	12	796.0000	1210.0000	B-6-3D_4/28/93	948.250	.	.
	SODIUM	12	12	1710.0000	13600.0000	B-6-3D_4/28/93	4897.083	.	.
	THALLIUM	1	12	2.0000	2.0000	B-2-3D_11/4/93	2.200	2.000	6.000
	VANADIUM	3	12	3.4000	5.0000	B-6-3D_01/29/94	2.000	2.000	3.000
	ZINC	5	12	9.3000	29.1000	B-2-3D_6/9/93	12.446	6.100	53.300

SUMMARY STATISTICS FOR THE BENVINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=SURFACE SOIL/EXPOSED SEDIMENTS (0-2')\* -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	ACETONE	1	15	27.0000	27.0000	LEACH(SS)-03(0-1')_10/2/92	7.883	11.500	19.000	
	METHYLENE CHLORIDE	2	15	3.0000	4.0000	SED-15(0-6')_4/29/93	5.617	4.000	19.000	
	TOLUENE	3	15	5.0000	9.0000	SS-02(0-1')_10/5/92	6.450	11.500	19.000	
BNAs	XYLENE (TOTAL)	1	15	14.0000	14.0000	SS-01(0-1')_9/30/92	7.050	11.500	19.000	
	2,4-DIMETHYLPHENOL	1	15	420.0000	420.0000	SED-16(0-6')_4/29/93	283.000	380.000	2000.000	
	4-METHYLPHENOL	1	15	420.0000	420.0000	SED-16(0-6')_4/29/93	283.000	380.000	2000.000	
	BENZO(A)ANTHRACENE	1	15	44.0000	44.0000	LEACH(SS)-04(0-1')_10/2/92	257.933	380.000	2000.000	
	BENZO(G,H,I)PERYLENE	1	15	66.0000	66.0000	SS-05(0-1')_10/6/92	252.733	380.000	2000.000	
	BIS(2-ETHYLHEXYL)PHTHALATE	11	15	40.0000	1100.0000	SS-01DL(0-1')_9/30/92	228.533	380.000	420.000	
	BUTYLBENZYLPHthalATE	2	15	55.0000	540.0000	SS-01DL(0-1')_9/30/92	228.000	380.000	620.000	
	DI-N-BUTYLPHthalATE	1	15	49.0000	49.0000	LEACH(SS)-04(0-1')_10/2/92	258.267	380.000	2000.000	
	DIETHYLPHthalATE	1	15	420.0000	420.0000	SED-16(0-6')_4/29/93	283.000	380.000	2000.000	
	FLUORANTHENE	1	15	120.0000	120.0000	LEACH(SS)-04(0-1')_10/2/92	263.000	380.000	2000.000	
	NAPHTHALENE	1	15	96.0000	96.0000	SS-05(0-1')_10/6/92	254.733	380.000	2000.000	
	PHENANTHRENE	2	15	73.0000	75.0000	SS-05(0-1')_10/6/92	244.200	380.000	2000.000	
	PYRENE	3	15	70.0000	500.0000	SS-01DL(0-1')_9/30/92	210.667	380.000	500.000	
	Pest/PCBs	4,4'-DDD	4	15	0.1390	0.2600	SED-11(0-6')_10/6/92	1.469	0.350	6.200
		4,4'-DDE	11	15	0.0770	3.9000	SS-01(0-1')_9/30/92	1.234	3.600	4.100
		4,4'-DDT	3	15	0.3050	6.8000	SS-01(0-1')_9/30/92	1.030	0.140	3.700
		ALDRIN	6	13	0.0670	1.9000	SS-01(0-1')_9/30/92	0.901	0.330	2.500
ALPHA-CHLORDANE		2	13	0.1800	0.4400	SS-03(0-1')_10/7/92	0.955	1.800	3.100	
AROCLOR 1016		2	20	4000.0000	6400.0000	SS-75NNW35W(0-1')_4/28/93	550.700	36.000	370.000	
AROCLOR 1248		7	20	42.0000	11000.0000	SS-75NNW(0-1')_4/28/93	707.125	36.000	430.000	
DELTA-BHC		2	14	0.1600	0.2700	SS-02(0-1')_10/5/92	0.916	1.800	3.100	
DIELDRIN		4	14	0.0640	2.7000	SS-01(0-1')_9/30/92	1.574	0.310	6.200	
ENDOSULFAN I		3	15	0.0740	8.9000	SS-01(0-1')_9/30/92	1.373	0.140	3.100	
ENDOSULFAN II		9	15	0.1300	3.9000	SS-01(0-1')_9/30/92	1.362	3.800	6.200	
ENDOSULFAN SULFATE		1	15	0.2400	0.2400	SS-02(0-1')_10/5/92	1.710	0.057	6.200	
ENDRIN		4	15	0.0440	0.5400	SS-03(0-1')_10/7/92	1.338	0.160	6.200	
ENDRIN ALDEHYDE		3	15	0.2600	0.6200	SED-11(0-6')_10/6/92	1.737	3.600	6.200	
ENDRIN KETONE		3	15	0.2000	9.5000	SS-01(0-1')_9/30/92	2.933	3.600	19.000	
GAMMA-CHLORDANE		7	13	0.0290	2.4000	SS-01(0-1')_9/30/92	0.728	0.290	2.000	
HEPTACHLOR		1	13	0.0170	0.0170	SED-05(0-6')_9/30/92	0.990	1.800	3.100	
HEPTACHLOR EPOXIDE		1	13	2.4000	2.4000	SS-01(0-1')_9/30/92	1.177	1.800	3.100	
METHOXYCHLOR		2	15	2.9000	14.0000	SS-01(0-1')_9/30/92	8.319	0.620	31.000	
Inor.		ALUMINUM	15	15	1170.0000	8080.0000	LEACH(SS)-03(0-1')_10/2/92	3795.667	.	.
	ARSENIC	13	15	1.6000	4.5000	SS-01(0-1')_9/30/92	2.657	1.000	1.000	
	BARIUM	15	15	10.9000	188.0000	SS-05(0-1')_10/6/92	51.410	.	.	
	BERYLLIUM	1	9	0.7400	0.7400	LEACH(SS)-03(0-1')_10/2/92	0.215	0.230	0.450	
	CADMIUM	1	9	1.4000	1.4000	SED-10(0-6')_10/2/92	0.671	0.980	1.300	
	CALCIUM	15	15	4560.0000	119000.0000	LEACH(SS)-04(0-1')_10/2/92	50069.000	.	.	
	CHROMIUM	15	15	2.3000	9.7000	LEACH(SS)-03(0-1')_10/2/92	5.277	.	.	
	COBALT	15	15	4.3000	62.8000	SED-10(0-6')_10/2/92	11.367	.	.	
	COPPER	15	15	6.5000	53.4000	SED-10(0-6')_10/2/92	17.973	.	.	
	CYANIDE	7	15	0.1100	0.6200	SS-05(0-1')_10/6/92	0.148	0.060	0.220	
	IRON	15	15	5250.0000	39600.0000	LEACH(SS)-03(0-1')_10/2/92	15256.667	.	.	
	LEAD	14	14	4.5000	52.1000	SS-01(0-1')_9/30/92	18.839	.	.	
	MAGNESIUM	15	15	1760.0000	44300.0000	LEACH(SS)-04(0-1')_10/2/92	17911.333	.	.	

\* All samples collected from 0-2' interval except one sample from 2-3' interval.

SUMMARY STATISTICS . . . THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=SURFACE SOIL/EXPOSED SEDIMENTS (0-2')\* -----

(continued)

Class	NAME	Num.	Num.	Lowest	Highest	Highest	Arithmetic	Lowest	Highest
		Times	Samples	Detected	Detected	Conc.		Mean	Observed
		Detected	Analyzed	Conc.	Conc.	Locat.	Conc.	Detect. Limit	Detect. Limit
	MANGANESE	15	15	226.0000	2380.0000	SS-05(0-1')_10/6/92	642.267	.	.
	MERCURY	7	15	0.0700	0.3900	SED-11(0-6')_10/6/92	0.102	0.010	0.060
	NICKEL	13	13	3.1000	20.8000	LEACH(SS)-03(0-1')_10/2/92	9.562	.	.
	POTASSIUM	15	15	88.3000	834.0000	LEACH(SS)-03(0-1')_10/2/92	307.087	.	.
	SELENIUM	2	13	0.6100	0.7800	SS-02(0-1')_10/5/92	0.325	0.460	0.750
	SILVER	3	11	0.7200	7.4000	SED-11(0-6')_10/6/92	1.150	0.460	0.510
	SODIUM	2	15	29.0000	63.2000	SED-15(0-6')_4/29/93	21.720	8.500	194.000
	THALLIUM	1	9	0.7500	0.7500	LEACH(SS)-04(0-1')_10/2/92	0.490	0.685	1.500
	VANADIUM	15	15	1.8000	10.9000	LEACH(SS)-03(0-1')_10/2/92	5.863	.	.
	ZINC	15	15	16.7500	513.0000	SS-04(0-1')_10/6/92	78.730	.	.

\* All samples collected from 0-2' interval except one sample from 2-3' interval.

SUMMARY STATISTICS FOR THE BENNY SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SO<sub>2</sub> RESULTS IN MG/KG AND AIR RESULTS IN UG/M<sup>3</sup>

----- TYPE=SURFACE SOILS/SEDIMENT - DRAINAGE POND -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Pest/PCBs	AROCLOR 1248	3	3	35.0000	19000.0000	SS11-6_04/18/94	9078.333	.	.

SUMMARY STATISTICS FOR THE BENNING SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-SURFACE SOILS - SOUTH OF LANDFILL -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Pest/PCBs	AROCOR 1248	2	8	60.0000	310.0000	SS9-12_04/18/94	52.625	17.000	17.000

SUMMARY STATISTICS FOR THE BENNINGTON SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=SUBSURFACE SOILS - DRAINAGE POND -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Obsarved Detect. Limit	Highest Obsarved Detect. Limit
Pest/PCBs	AROCLOR 1248	6	8	25.0000	940.0000	SUB11-3_04/19/94	218.750	17.000	17.000

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=DRAINAGE POND SEDIMENTS -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	ACETONE	2	2	115.0000	1100.0000	SED-24	607.500	.	.
	TOLUENE	1	2	6.0000	6.0000	SED-21	33.000	120.000	120.000
BNAs	1,4-DICHLOROBENZENE	1	2	110.0000	110.0000	SED-24	203.750	595.000	595.000
	2-METHYLNAPHTHALENE	1	2	91.0000	91.0000	SED-24	194.250	595.000	595.000
	BENZO(A)ANTHRACENE	1	2	120.0000	120.0000	SED-24	208.750	595.000	595.000
	BENZO(A)PYRENE	1	2	100.0000	100.0000	SED-24	198.750	595.000	595.000
	BENZO(B)FLUORANTHENE	1	2	230.0000	230.0000	SED-24	263.750	595.000	595.000
	CHRYSENE	1	2	140.0000	140.0000	SED-24	218.750	595.000	595.000
	DI-N-BUTYLPHTHALATE	1	2	78.0000	78.0000	SED-21	236.500	790.000	790.000
	FLUORANTHENE	1	2	260.0000	260.0000	SED-24	278.750	595.000	595.000
	N-NITROSO-DI-N-PROPYLAMINE	1	2	310.0000	310.0000	SED-24	303.750	595.000	595.000
	NAPHTHALENE	1	2	140.0000	140.0000	SED-24	218.750	595.000	595.000
	PYRENE	1	2	260.0000	260.0000	SED-24	278.750	595.000	595.000
Pest/PCBs	4,4'-DDE	2	2	78.0000	93.0000	SED-24	85.500	.	.
	AROCLOR 1242	2	2	72500.0000	100000.0000	SED-24	86250.000	.	.
Inor.	ALUMINUM	2	2	5680.0000	9610.0000	SED-21	7645.000	.	.
	ARSENIC	2	2	12.9000	27.5000	SED-24	20.200	.	.
	BARIUM	2	2	508.0000	508.0000	SED-21	508.000	.	.
	BERYLLIUM	1	2	0.3950	0.3950	SED-21	0.318	0.480	0.480
	CALCIUM	2	2	37400.0000	70300.0000	SED-21	53850.000	.	.
	CHROMIUM	2	2	12.7000	16.5000	SED-21	14.600	.	.
	COBALT	2	2	7.0000	12.1500	SED-21	9.575	.	.
	COPPER	2	2	32.2000	32.7000	SED-24	32.450	.	.
	CYANIDE	2	2	0.2000	0.4100	SED-24	0.305	.	.
	IRON	2	2	26400.0000	47500.0000	SED-21	36950.000	.	.
	LEAD	2	2	118.5000	169.0000	SED-24	143.750	.	.
	MAGNESIUM	2	2	10700.0000	17500.0000	SED-21	14100.000	.	.
	MANGANESE	2	2	338.0000	806.5000	SED-21	572.250	.	.
	MERCURY	2	2	0.2300	0.2400	SED-21	0.235	.	.
	NICKEL	2	2	12.3000	16.9000	SED-21	14.600	.	.
	POTASSIUM	2	2	1930.0000	2000.0000	SED-21	1965.000	.	.
	SODIUM	2	2	632.5000	1110.0000	SED-24	871.250	.	.
	VANADIUM	2	2	13.7000	15.3000	SED-21	14.500	.	.
	ZINC	2	2	212.5000	221.0000	SED-24	216.750	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE=POND/BROOK SUBMERGED SEDIMENTS-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	2-BUTANONE	3	8	160.0000	530.0000	SED-06(0-6'')_10/1/92	129.125	11.000	17.000
	ACETONE	3	8	480.0000	2000.0000	SED-06(0-6'')_10/1/92	387.875	11.000	17.000
BNAs	BIS(2-ETHYLHEXYL) PHTHALATE	6	8	36.0000	260.0000	SED-06(0-6'')_10/1/92	133.625	410.000	420.000
	Post/PCBs								
	4,4'-DDD	1	8	0.2600	0.2600	SED-01(0-6'')_9/30/92	2.249	0.460	11.000
	4,4'-DDE	2	8	0.2000	3.2000	SED-06(0-6'')_10/1/92	2.756	3.800	11.000
	4,4'-DDT	2	8	0.3500	0.3800	SED-09(0-6'')_10/1/92	1.501	0.160	11.000
	ALDRIN	1	8	0.0630	0.0630	SED-02(0-6'')_9/30/92	1.920	2.000	11.000
	ALPHA-CHLORDANE	1	8	11.0000	11.0000	SED-06(0-6'')_10/1/92	2.719	1.900	5.400
	BETA-BHC	2	8	0.4700	0.5500	SED-07(0-6'')_10/1/92	1.690	1.900	11.000
	DIELDRIN	2	8	0.0840	0.6700	SED-06(0-6'')_10/1/92	2.426	3.800	11.000
	ENDOSULFAN I	1	8	0.0430	0.0430	SED-04(0-6'')_10/1/92	1.912	1.900	11.000
	ENDOSULFAN II	1	8	0.7300	0.7300	SED-06(0-6'')_10/1/92	2.773	3.800	11.000
	HEPTACHLOR	1	8	0.0740	0.0740	SED-02(0-6'')_9/30/92	1.922	2.000	11.000
	HEPTACHLOR EPOXIDE	2	8	0.0400	0.8100	SED-06(0-6'')_10/1/92	1.325	1.900	5.400
Inor.	ALUMINUM	8	8	1440.0000	4490.0000	SED-07(0-6'')_10/1/92	2430.000	.	.
	ANTIMONY	1	8	9.4000	9.4000	SED-07(0-6'')_10/1/92	3.406	2.500	14.400
	ARSENIC	8	8	1.6000	64.2000	SED-08(0-6'')_10/1/92	20.462	.	.
	BARIUM	8	8	27.8000	4170.0000	SED-06(0-6'')_10/1/92	984.550	.	.
	CALCIUM	8	8	11200.0000	123000.000	SED-03(0-6'')_10/1/92	59550.000	.	.
	CHROMIUM	8	8	2.9000	17.2000	SED-06(0-6'')_10/1/92	7.475	.	.
	COBALT	8	8	8.7000	121.0000	SED-08(0-6'')_10/1/92	36.400	.	.
	COPPER	8	8	5.4000	26.1000	SED-02(0-6'')_9/30/92	13.500	.	.
	CYANIDE	3	8	0.2700	1.0000	SED-08(0-6'')_10/1/92	0.275	0.060	0.440
	IRON	8	8	8400.0000	182000.000	SED-04(0-6'')_10/1/92	43562.500	.	.
	LEAD	8	8	2.7000	55.3000	SED-06(0-6'')_10/1/92	13.750	.	.
	MAGNESIUM	8	8	3720.0000	53900.0000	SED-03(0-6'')_10/1/92	21490.000	.	.
	MANGANESE	8	8	426.0000	13300.0000	SED-08(0-6'')_10/1/92	3356.750	.	.
	NICKEL	7	8	6.3000	21.9000	SED-07(0-6'')_10/1/92	10.675	14.400	14.400
	POTASSIUM	8	8	94.9000	519.0000	SED-06(0-6'')_10/1/92	252.612	.	.
	SELENIUM	2	8	1.3000	4.8000	SED-06(0-6'')_10/1/92	1.315	0.460	6.200
	SILVER	1	8	1.6000	1.6000	SED-08(0-6'')_10/1/92	0.609	0.460	2.600
VANADIUM	8	8	3.7000	15.1000	SED-06(0-6'')_10/1/92	7.025	.	.	
ZINC	7	8	14.2000	87.4000	SED-06(0-6'')_10/1/92	31.350	26.400	26.400	

SUMMARY STATISTICS FOR THE BENNING SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE-PHASE 1B SUBMERGED SEDIMENTS-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	1	1	2080.0000	2080.0000	SED-PC_05/04/94	2080.000	.	.
	ARSENIC	1	1	5.2500	5.2500	SED-PC_05/04/94	5.250	.	.
	BARIUM	1	1	84.4500	84.4500	SED-PC_05/04/94	84.450	.	.
	CALCIUM	1	1	37550.0000	37550.0000	SED-PC_05/04/94	37550.000	.	.
	CHROMIUM	1	1	4.6000	4.6000	SED-PC_05/04/94	4.600	.	.
	COBALT	1	1	10.8000	10.8000	SED-PC_05/04/94	10.800	.	.
	COPPER	1	1	7.6500	7.6500	SED-PC_05/04/94	7.650	.	.
	IRON	1	1	12100.0000	12100.0000	SED-PC_05/04/94	12100.000	.	.
	LEAD	1	1	6.3000	6.3000	SED-PC_05/04/94	6.300	.	.
	MAGNESIUM	1	1	17950.0000	17950.0000	SED-PC_05/04/94	17950.000	.	.
	MANGANESE	1	1	1235.0000	1235.0000	SED-PC_05/04/94	1235.000	.	.
	NICKEL	1	1	8.6500	8.6500	SED-PC_05/04/94	8.650	.	.
	POTASSIUM	1	1	246.5000	246.5000	SED-PC_05/04/94	246.500	.	.
	VANADIUM	1	1	3.9000	3.9000	SED-PC_05/04/94	3.900	.	.
	ZINC	1	1	21.7500	21.7500	SED-PC_05/04/94	21.750	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=SEDIMENT UNDERDRAIN -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	ACETONE	1	1	1100.0000	1100.0000	SED-23	1100.000	.	.
	BENZENE	1	1	80.0000	80.0000	SED-23	80.000	.	.
BNA	DI-N-BUTYLPHTEALATE	1	1	17000.0000	17000.0000	SED-23DL	17000.000	.	.
Pest/PCBs	ALDRIN	1	1	81000.0000	81000.0000	SED-23	81000.000	.	.
	AROCLOR 1242	1	1	14000000.0	14000000.0	SED-23	14000000.0	.	.
	DIELDRIN	1	1	47000.0000	47000.0000	SED-23	47000.000	.	.
Inor.	ALUMINUM	1	1	1680.0000	1680.0000	SED-23	1680.000	.	.
	ARSENIC	1	1	37.4000	37.4000	SED-23	37.400	.	.
	BARIUM	1	1	561.0000	561.0000	SED-23	561.000	.	.
	CALCIUM	1	1	14300.0000	14300.0000	SED-23	14300.000	.	.
	CHROMIUM	1	1	8.9000	8.9000	SED-23	8.900	.	.
	COBALT	1	1	5.4000	5.4000	SED-23	5.400	.	.
	COPPER	1	1	15.7000	15.7000	SED-23	15.700	.	.
	CYANIDE	1	1	0.6600	0.6600	SED-23	0.660	.	.
	IRON	1	1	13600.0000	13600.0000	SED-23	13600.000	.	.
	LEAD	1	1	22.2000	22.2000	SED-23	22.200	.	.
	MAGNESIUM	1	1	4720.0000	4720.0000	SED-23	4720.000	.	.
	MANGANESE	1	1	79.6000	79.6000	SED-23	79.600	.	.
	NICKEL	1	1	9.5000	9.5000	SED-23	9.500	.	.
	POTASSIUM	1	1	1890.0000	1890.0000	SED-23	1890.000	.	.
	SODIUM	1	1	2360.0000	2360.0000	SED-23	2360.000	.	.
	VANADIUM	1	1	33.4000	33.4000	SED-23	33.400	.	.
	ZINC	1	1	402.0000	402.0000	SED-23	402.000	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=LEACHATE/LANDFILL UNDERDRAIN (AQUEOUS) -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit	
VOCs	ACETONE	1	1	26.0000	26.0000	LEACH (UD)-01_10/2/92	26.000	.	.	
	BENZENE	1	1	9.5000	9.5000	LEACH (UD)-01_10/2/92	9.500	.	.	
	CHLOROBENZENE	1	1	7.5000	7.5000	LEACH (UD)-01_10/2/92	7.500	.	.	
	CHLOROETHANE	1	1	8.0000	8.0000	LEACH (UD)-01_10/2/92	8.000	.	.	
	ETHYLBENZENE	1	1	16.0000	16.0000	LEACH (UD)-01_10/2/92	16.000	.	.	
	TOLUENE	1	1	18.5000	18.5000	LEACH (UD)-01_10/2/92	18.500	.	.	
	XYLENE (TOTAL)	1	1	68.0000	68.0000	LEACH (UD)-01_10/2/92	68.000	.	.	
	BNA	1,2,4-TRICHLOROBENZENE	1	1	4.5000	4.5000	LEACH (UD)-01_10/2/92	4.500	.	.
		1,4-DICHLOROBENZENE	1	1	8.5000	8.5000	LEACH (UD)-01_10/2/92	8.500	.	.
		2-METHYLNAPHTHALENE	1	1	35.5000	35.5000	LEACH (UD)-01_10/2/92	35.500	.	.
BENZO(A)ANTHRACENE		1	1	2.0000	2.0000	LEACH (UD)-01_10/2/92	2.000	.	.	
BENZO(B)FLUORANTHENE		1	1	1.0000	1.0000	LEACH (UD)-01_10/2/92	1.000	.	.	
BENZO(K)FLUORANTHENE		1	1	1.0000	1.0000	LEACH (UD)-01_10/2/92	1.000	.	.	
BIS(2-ETHYLHEXYL)PHTHALATE		1	1	44.0000	44.0000	LEACH (UD)-01_10/2/92	44.000	.	.	
BUTYLBENZYLPHthalate		1	1	6.0000	6.0000	LEACH (UD)-01_10/2/92	6.000	.	.	
CHRYSENE		1	1	2.5000	2.5000	LEACH (UD)-01_10/2/92	2.500	.	.	
DI-N-BUTYLPHthalate		1	1	9.0000	9.0000	LEACH (UD)-01_10/2/92	9.000	.	.	
Pest/PCBs	NAPHTHALENE	1	1	28.5000	28.5000	LEACH (UD)-01_10/2/92	28.500	.	.	
	4,4'-DDE	1	1	275.0000	275.0000	LEACH (UD)-01_10/2/92	275.000	.	.	
	ALDRIN	1	1	265.0000	265.0000	LEACH (UD)-01_10/2/92	265.000	.	.	
	AROCLOR 1248	1	1	57500.0000	57500.0000	LEACH (UD)-01_10/2/92	57500.000	.	.	
	ENDOSULFAN II	1	1	58.5000	58.5000	LEACH (UD)-01_10/2/92	58.500	.	.	
Inor.	GAMMA-CHLORDANE	1	1	42.0000	42.0000	LEACH (UD)-01_10/2/92	42.000	.	.	
	ALUMINUM	1	1	737.0000	737.0000	LEACH (UD)-01_10/2/92	737.000	.	.	
	ARSENIC	1	1	158.0000	158.0000	LEACH (UD)-01_10/2/92	158.000	.	.	
	BARIUM	1	1	2055.0000	2055.0000	LEACH (UD)-01_10/2/92	2055.000	.	.	
	CALCIUM	1	1	80800.0000	80800.0000	LEACH (UD)-01_10/2/92	80800.000	.	.	
	CHROMIUM	1	1	11.8000	11.8000	LEACH (UD)-01_10/2/92	11.800	.	.	
	COBALT	1	1	12.8500	12.8500	LEACH (UD)-01_10/2/92	12.850	.	.	
	COPPER	1	1	17.7000	17.7000	LEACH (UD)-01_10/2/92	17.700	.	.	
	IRON	1	1	17500.0000	17500.0000	LEACH (UD)-01_10/2/92	17500.000	.	.	
	LEAD	1	1	11.8500	11.8500	LEACH (UD)-01_10/2/92	11.850	.	.	
	MAGNESIUM	1	1	106000.0000	106000.0000	LEACH (UD)-01_10/2/92	106000.000	.	.	
	MANGANESE	1	1	207.0000	207.0000	LEACH (UD)-01_10/2/92	207.000	.	.	
	NICKEL	1	1	117.0000	117.0000	LEACH (UD)-01_10/2/92	117.000	.	.	
	POTASSIUM	1	1	320500.0000	320500.0000	LEACH (UD)-01_10/2/92	320500.000	.	.	
	SODIUM	1	1	560500.0000	560500.0000	LEACH (UD)-01_10/2/92	560500.000	.	.	
	VANADIUM	1	1	19.6500	19.6500	LEACH (UD)-01_10/2/92	19.650	.	.	
	ZINC	1	1	1101.5000	1101.5000	LEACH (UD)-01_10/2/92	1101.500	.	.	

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=SURFACE WATER -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	ACETONE	1	6	10.0000	10.0000	SWAT-07_10/1/92	5.833	10.000	10.000
	CARBON DISULFIDE	1	6	13.0000	13.0000	SWAT-07_10/1/92	5.750	3.000	10.000
Pest/PCBs	4,4'-DDD	3	6	0.0020	0.0065	SWAT-06_10/1/92	0.013	0.004	0.120
	DIELDRIN	2	6	0.0010	0.0010	SWAT-01_9/30/92	0.035	0.100	0.120
	GAMMA-CHLORDANE	2	6	0.0010	0.0020	SWAT-01_9/30/92	0.018	0.050	0.062
	METHOXYCHLOR	1	6	0.0090	0.0090	SWAT-06_10/1/92	0.182	0.050	0.620
Inor.	ALUMINUM	3	6	39.2000	4490.0000	SWAT-07_10/1/92	853.867	37.000	37.000
	ARSENIC	3	6	25.3000	116.4000	SWAT-06_10/1/92	30.617	4.000	4.000
	BARIUM	6	6	227.0000	9170.0000	SWAT-06_10/1/92	2262.500	.	.
	CALCIUM	6	6	78400.0000	178000.000	SWAT-06_10/1/92	108500.000	.	.
	CHROMIUM	1	6	10.3000	10.3000	SWAT-07_10/1/92	5.467	9.000	9.000
	COBALT	3	6	5.0000	154.0000	SWAT-07_10/1/92	40.825	4.000	4.000
	COPPER	2	6	13.7000	17.5000	SWAT-07_10/1/92	6.200	3.000	3.000
	CYANIDE	1	6	2.7000	2.7000	SWAT-06_10/1/92	0.975	1.000	2.300
	IRON	6	6	158.0000	388500.000	SWAT-06_10/1/92	79348.000	.	.
	LEAD	2	6	16.0000	39.5000	SWAT-06_10/1/92	10.583	2.000	10.000
	MAGNESIUM	6	6	21700.0000	34300.0000	SWAT-06_10/1/92	29883.333	.	.
	MANGANESE	6	6	32.7000	28200.0000	SWAT-07_10/1/92	5929.617	.	.
	NICKEL	2	6	14.0000	30.3000	SWAT-07_10/1/92	11.050	11.000	11.000
	ORGANIC CARBON, TOTAL	4	4	2.9000	10.2000	SWAT-06_10/1/92	5.925	.	.
	POTASSIUM	6	6	4040.0000	35100.0000	SWAT-02_9/30/92	15230.000	.	.
	SILVER	2	6	2.0000	3.4000	SWAT-07_10/1/92	6.567	2.000	62.000
	SODIUM	6	6	7500.0000	53500.0000	SWAT-02_9/30/92	27633.333	.	.
	TOTAL HARDNESS AS CaCO3	4	4	271.0000	370.0000	SWAT-06_10/1/92	329.250	.	.
	VANADIUM	2	6	11.6000	12.5000	SWAT-06_10/1/92	5.350	4.000	4.000
	ZINC	2	6	43.6000	81.9000	SWAT-06_10/1/92	23.583	8.000	8.000

SUMMARY STATISTICS FOR THE BENNING SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-PHASE 1B SURFACE WATER -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	1	2	108.0000	108.0000	SW-16T_05/19/94	56.750	11.000	11.000
	BARIUM	2	2	36.8000	762.0000	SW-15T_05/19/94	199.400	.	.
	CALCIUM	2	2	74900.0000	91900.0000	SW-16T_05/19/94	83400.000	.	.
	CYANIDE	1	2	2.0000	2.0000	SW-16T_05/19/94	1.500	2.000	2.000
	IRON	2	2	141.0000	344.0000	SW-15T_05/19/94	242.500	.	.
	MAGNESIUM	2	2	18700.0000	24600.0000	SW-15T_05/19/94	21650.000	.	.
	MANGANESE	2	2	14.5000	92.0000	SW-15T_05/19/94	53.250	.	.
	POTASSIUM	2	2	3300.0000	11600.0000	SW-15T_05/19/94	7450.000	.	.
	SODIUM	2	2	5580.0000	20700.0000	SW-15T_05/19/94	13140.000	.	.

SUMMARY STATISTICS FOR THE BENNI SITE - PHASE 1B RESULTS  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-PHASE 1B SURFACE WATER - FILTERED -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
Inor.	ALUMINUM	2	2	13.7000	15.6000	SW-16D_05/19/94	14.650	.	.
	BARIUM	2	2	37.9000	757.0000	SW-15D_05/19/94	397.450	.	.
	CALCIUM	2	2	75100.0000	91800.0000	SW-16D_05/19/94	83450.000	.	.
	IRON	2	2	8.3000	68.6000	SW-15D_05/19/94	38.450	.	.
	MAGNESIUM	2	2	18800.0000	24600.0000	SW-15D_05/19/94	21700.000	.	.
	MANGANESE	2	2	6.7000	69.2000	SW-15D_05/19/94	37.950	.	.
	POTASSIUM	2	2	3430.0000	11600.0000	SW-15D_05/19/94	7515.000	.	.
	SODIUM	2	2	5640.0000	20800.0000	SW-15D_05/19/94	13220.000	.	.
	ZINC	2	2	7.4000	8.3000	SW-15D_05/19/94	7.850	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

-----TYPE=TRANSFER STATION AIR SAMPLES-----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	1,1,1-TRICHLOROETHANE	5	10	0.5050	2.0370	TSR-2_10/23/92	0.747	0.466	1.076
	1,1-DICHLOROETHANE	1	10	0.1000	0.1000	TSR-2_10/23/92	0.223	0.242	0.746
	BENZENE	5	10	0.3270	1.6300	TSR-2_10/23/92	0.610	0.466	1.256
	ETHYLBENZENE	2	10	0.2960	0.3090	TS-2_10/23/92	0.232	0.242	0.746
	XYLENE	4	10	0.2900	1.4070	TSR-2_10/23/92	0.629	0.466	1.377
Pest/PCBs	AROCLOR 1242	5	5	0.0030	0.0059	TS-2_10/23/92	0.004	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=AMBIENT AIR/DOWNWIND AIR SAMPLES -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	1,1,1-TRICHLOROETHANE	3	6	0.3750	2.2220	P6-2_10/23/92	0.928	0.400	3.208
	1,4-DICHLOROBENZENE	1	6	0.2670	0.2670	P6-8_10/31/92	0.224	0.375	0.556
	BENZENE	3	6	0.2100	1.9440	P6-2_10/23/92	0.958	0.400	5.417
	ETHYLBENZENE	1	6	0.3330	0.3330	P6-2_10/23/92	0.341	0.375	1.833
	XYLENE	3	6	0.3080	1.3330	P6-2_10/23/92	1.094	0.749	7.500
Pest/PCBs	AROCLOR 1242	5	5	0.0002	0.0011	P2-1_10/23/92	0.001	.	.

SUMMARY STATISTICS OF THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE-AIR SAMPLES FROM ON-SITE ACTIVITY -----

Class	NAME	Num. Times Detected	Num. Samples Analyzed	Lowest Detected Conc.	Highest Detected Conc.	Highest Conc. Locat.	Arithmetic Mean Conc.	Lowest Observed Detect. Limit	Highest Observed Detect. Limit
VOCs	1,1,1-TRICHLOROETHANE	1	3	1.2380	1.2380	P4-4_10/26/92	0.696	0.549	1.149
	BENZENE	2	3	0.5710	11.0640	P4-7_10/30/92	3.970	0.549	0.549
	CHLOROBENZENE	1	3	4.2550	4.2550	P4-7_10/30/92	1.589	0.476	0.549
	ETHYLBENZENE	1	3	5.1060	5.1060	P4-7_10/30/92	1.873	0.476	0.549
	XYLENE	1	3	12.3400	12.3400	P4-7_10/30/92	4.455	0.952	1.099
Pest/PCBs	AROCLOR 1242	1	1	0.0011	0.0011	P4-3_10/26/92	0.001	.	.

SUMMARY STATISTICS FOR THE BENNINGTON SITE  
 ALL RESULTS IN UG/L OR UG/KG, EXCEPT INORGANIC SOIL RESULTS IN MG/KG AND AIR RESULTS IN UG/M3

----- TYPE=UPWIND AIR SAMPLES -----

Class	NAME	Num.	Num.	Lowest	Highest	Highest	Arithmetic	Lowest	Highest
		Times Detected	Samples Analyzed	Detected Conc.	Detected Conc.	Conc. Locat.	Mean Conc.	Observed Detect. Limit	Observed Detect. Limit
VOCs	1,1,1-TRICHLOROETHANE	4	6	0.4450	1.5710	P3-2_10/23/92	0.728	0.412	1.149
	BENZENE	4	6	0.3200	1.4640	P3-2_10/23/92	0.592	0.412	1.106
	ETHYLBENZENE	1	6	0.2320	0.2320	P3-2_10/23/92	0.218	0.315	0.562
	XYLENE	2	6	0.5500	1.0710	P3-2_10/23/92	0.545	0.562	1.191
Pest/PCBs	AROCLOR 1242	4	5	0.0002	0.0009	P2-2_10/23/92	0.000	0.000	0.000
	AROCLOR 1254	3	5	0.0001	0.0001	P5-2_10/22/92	0.000	0.000	0.000

APPENDIX C

1997 Risk Assessment Tables

Summary Statistics for the Bennington Site - LHM Results  
 OVERBURDEN PLUME AREA WELLS EXCLUDING WELLS B-6-1 AND B-14

Class	Name	Number of Times Detected	Number of Samples Analyzed	Lowest Detected Concentration	Highest Detected Concentration	Highest Concentration Location	Arithmetic Mean Concentration	Lowest Observed Detection Limit	Highest Observed Detection Limit	MCL (c) ug/L	VT Std. ug/L	COC Selection			
OCHEM	mg/L	Chemical Oxygen Demand		19	24	11.00	49.00	B-5-2	R-07	22.40	10.0	10.0			
		Chloride		24	24	25.00	240.00	B-2-2	R-09	69.50	1.0	3.0			
Inorganics	ug/L	Aluminum		8	24	26.10	130.00	B-15	R-08	79.75	200.0	200.0	*		
		Arsenic		21	24	1.40	31.00	B-15	R-08	16.25	10.0	10.0	50	50	*
		Barium		24	24	89.00	4043.40	B-5-2	R-07	1676.97	200.0	200.0	2000	1000	*
		Cadmium		1	24	4.50	4.50	B-5-2	R-09	2.58	5.0	5.0	5	5	a
		Calcium		24	24	61600.00	130000.00	B-5-1	R-08	110969.30	1000.0	5000.0			b
		Chromium		1	24	24.00	24.00	B-2-1	R-08	5.79	10.0	10.0	100	50	a
		Cobalt		20	24	26.00	102.30	B-5-2	R-07	46.65	50.0	50.0			*
		Cyanide		1	24	2.20	2.20	B-5-1	R-07	4.88	10.0	10.0	200	154	a
		Iron		23	24	53.70	22963.70	B-5-2	R-07	10311.76	100.0	100.0			*
		Lead		5	24	1.30	10.60	B-2-2	R-07	1.93	3.0	3.0		20	*
		Magnesium		24	24	14800.00	47551.10	B-5-2	R-07	32730.90	1000.0	5000.0			b
		Manganese		24	24	4.90	1480.00	B-15	R-09	783.24	15.0	15.0			*
		Nickel		17	24	8.90	50.50	B-5-2	R-07	24.48	40.0	40.0	100	350	*
		Potassium		24	24	2650.00	38571.10	B-5-22	R-07	15760.00	1000.0	5000.0			b
		Sodium		24	24	19000.00	111000.00	B-2-2	R-09	46681.40	1000.0	5000.0			b
		Vanadium		3	24	5.10	5.50	B-5-1	R-08	22.53	50.0	50.0			*
		Zinc		15	24	50.40	323.00	B-2-1	R-07	71.75	20.0	20.0			*
PCBs	ug/L	PCB		11	21	2.10	12.00	B-5-2	R-09	3.72	0.2	1.0	0.5	0.008	*
		2,2',6,6'-TetraCB		3	5	220.00	750.00	B-5-1	R-08	263.40	14.0	200.0			
		2,4,4'-TriCB		5	5	600.00	24000.00	B-5-1	R-08	7040.00	200.0	400.0			
		2,4,6-TriCB		2	5	310.00	350.00	B-5-1	R-08	185.64	17.0	400.0			
		2,6-DiCB		5	5	100000.00	450000.00	B-5-2	R-08	2740000.00	200.0	1000.0			
		2-MonoCB		5	5	100000.00	260000.00	B-5-2	R-08	1392000.00	400.0	5000.0			
		4,4'-DiCB		4	5	360.00	7700.00	B-5-2	R-08	3162.00	200.0	2100.0			
		4-MonoCB		5	5	2300.00	62000.00	B-5-1	R-08	31260.00	400.0	5000.0			
		Total Dichlorobiphenyls		9	9	40100.00	660000.00	B-5-2	R-08	2984233.00	100.0	1000.0			
		Total Hexachlorobiphenyls		1	9	200.00	200.00	B-2-2	R-09	167.94	16.0	1400.0			
		Total Monochlorobiphenyls		9	9	10500.00	260000.00	B-5-2	R-08	1063389.00	100.0	5000.0			
		Total Pentachlorobiphenyls		2	9	100.00	700.00	B-2-2	R-09	206.06	20.0	1400.0			
		Total Tetrachlorobiphenyls		8	9	800.00	25000.00	B-5-1	R-08	5951.11	20.0	800.0			
Total Trichlorobiphenyls		9	9	7700.00	75000.00	B-5-2	R-08	420633.30	100.0	600.0					
VOCs	ug/L	1,1,1-Trichloroethane		1	25	5.10	5.10	B-2-2	R-09	0.68	1.0	10.0	200	200	a
		1,1-Dichloroethane		21	25	0.85	17.00	B-5-2	R-07	4.97	1.0	10.0			*
		1,2,4-Trimethylbenzene		2	25	2.30	2.40	B-5-2	R-07	0.83	1.0	10.0			*
		1,2-Dichlorobenzene		3	25	0.61	0.67	B-5-2	R-07	0.70	1.0	10.0	600	620	*
		1,2-Dichloroethane		1	25	0.82	0.82	B-5-22	R-07	0.70	1.0	10.0	5	5	a
		1,4-Dichlorobenzene		12	25	0.48	2.70	B-5-2	R-07	1.19	1.0	10.0	75	75	*
		Benzene		14	25	0.52	4.50	B-5-2	R-07	1.56	1.0	10.0	5	5	*
		Chlorobenzene		16	25	0.57	4.60	B-5-2	R-07	1.64	1.0	10.0	100	100	*
		Chloroethane		18	25	1.50	50.00	B-5-2	R-06	8.15	1.0	10.0			*
		cis-1,2-Dichloroethane		10	25	0.50	14.00	B-5-2	R-07	2.90	1.0	10.0	70	70	*
		Ethyl benzene		3	25	0.26	0.53	B-15	R-06	0.68	1.0	10.0	700	680	*
		Isopropyl Benzene		2	25	0.70	0.87	B-15	R-06	0.70	1.0	10.0			*
		Methylene Chloride		5	25	0.55	2.20	B-5-2	R-08	0.90	1.0	10.0			*
		Naphthalene		2	25	2.20	5.50	B-15	R-07	0.95	1.0	10.0			*
		Toluene		4	25	0.26	0.88	B-5-2	R-08	0.71	1.0	10.0	1000	2420	*
		Vinyl Chloride		8	25	0.86	11.00	B-5-22	R-07	2.15	1.0	10.0	2	2	*
		Xylenes (total)		2	25	1.00	1.10	B-5-2	R-07	0.70	1.0	10.0	10000	400	*

\* Retained as a COC: Detected in greater than 5% of samples or maximum concentration exceeds MCL or VT Std.  
 (a) Not retained as a COC: Detected in 5% or less of samples and maximum concentration less than MCL or VT Std.  
 (b) Not retained as a COC: Chemical is an essential nutrient.  
 (c) Federal MCL, Drinking Water Standards and Health Advisories, May 1995.  
 (d) Vermont Primary Ground Water Quality Enforcement Standard, September 1988.

TABLE : 3 - 4  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/OVERBURDEN PLUME AREA (Excluding Wells B-6-1 and B-14)  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : CARCINOGENIC

3-18

Contaminant of Concern	EPA Weight of Evidence Classification	Maximum Contaminant Level (MCL) (a) (mg/L)	Average Concentration (mg/L)	Maximum Concentration (mg/L)	Exposure Factor (b)	Average Ingested Dose (c) (mg/kg/day)	Maximum Ingested Dose (d) (mg/kg/day)	Oral Slope Factor (mg/kg/day) <sup>-1</sup>	Average Increased CA Risk	Maximum Increased CA Risk
Benzene	A	5.00E-03	1.56E-03	4.50E-03	1.17E-02	3.85E-06	5.28E-05	2.90E-02	1E-07	2E-07
Chlorobenzene	D	1.00E-01	1.64E-03	4.60E-03	1.17E-02	4.05E-06	5.40E-05			
Chloroethane	B	--	8.15E-03	5.00E-02	1.17E-02	2.01E-05	5.87E-04	2.90E-03	6E-08	2E-07
1,2-Dichlorobenzene	D	6.00E-01	6.70E-04	6.70E-04	1.17E-02	1.65E-06	7.87E-06			
1,4-Dichlorobenzene	C	7.50E-02	1.19E-03	2.70E-03	1.17E-02	2.94E-06	3.17E-05	2.40E-02	7E-08	8E-07
1,1-Dichloroethane	C	--	4.97E-03	1.70E-02	1.17E-02	1.23E-05	2.00E-04			
1,2-Dichloroethene (cis)	D	7.00E-02	2.90E-03	1.40E-02	1.17E-02	7.16E-06	1.64E-04			
Ethylbenzene	D	7.00E-01	5.30E-04	5.30E-04	1.17E-02	1.31E-06	6.22E-06			
Isopropylbenzene	--	--	7.00E-04	8.70E-04	1.17E-02	1.73E-06	1.02E-05			
Methylene Chloride	B2	5.00E-03	9.00E-04	2.20E-03	1.17E-02	2.22E-06	2.58E-05	7.50E-03	2E-08	2E-07
Naphthalene	D	--	9.50E-04	5.60E-03	1.17E-02	2.35E-06	6.58E-05			
Toluene	D	1.00E+00	7.10E-04	8.80E-04	1.17E-02	1.75E-06	1.03E-05			
1,2,4-Trimethylbenzene	D	--	8.30E-04	2.40E-03	1.17E-02	2.05E-06	2.82E-05			
Vinyl Chloride	A	2.00E-03	2.15E-03	1.10E-02	1.17E-02	5.31E-06	1.29E-04	1.90E+00	1E-05	2E-04
Xylenes (Total)	D	1.00E+01	7.00E-04	1.10E-03	1.17E-02	1.73E-06	1.29E-05			
PCBs	B2	5.00E-04	3.72E-03	1.20E-02	1.17E-02	9.19E-06	1.41E-04	7.00E-02	6E-07	1E-05
Aluminum	D	--	7.98E-02	1.30E-01	1.17E-02	1.97E-04	1.53E-03			
Arsenic	A	5.00E-02	1.53E-02	3.10E-02	1.17E-02	3.77E-05	3.64E-04	1.75E+00	7E-05	8E-04
Barium	--	2.00E+00	1.68E+00	4.04E+00	1.17E-02	4.14E-03	4.75E-02			
Cobalt	--	--	4.67E-02	1.02E-01	1.17E-02	1.15E-04	1.20E-03			
Iron	--	--	1.03E+01	2.30E+01	1.17E-02	2.55E-02	2.70E-01			
Lead	B2	1.50E-02	1.93E-03	1.06E-02	1.17E-02	4.77E-06	1.24E-04			
Manganese	D	--	7.83E-01	1.48E+00	1.17E-02	1.93E-03	1.74E-02			
Nickel	A	1.00E-01	2.45E-02	5.05E-02	1.17E-02	6.05E-05	5.93E-04			
Vanadium	D	--	5.50E-03	5.50E-03	1.17E-02	1.36E-05	6.46E-05			
Zinc	D	--	7.18E-02	3.23E-01	1.17E-02	1.77E-04	3.79E-03			

-- Not available

a U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories, December 1993.

b Exposure Factor for RME = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 70 years \* 365 days/year) = 1.17 E-02

Exposure Factor for Central Tendency = (1.4 liters/day \* 350 days/year \* 9 years)/(70 kg \* 70 years \* 365 days/year) = 2.47 E-03

c Ingested Dose = Average Concentration \* Central Tendency Exposure Factor

d Ingested Dose = Maximum Concentration \* RME Exposure Factor

TOTAL RISK	8E-05	2E-04
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TABLE : 3 - 5  
 SITE : BENNINGTON LANDFILL  
 ENV. MEDIUM : GROUND WATER/OVERBURDEN PLUME AREA (Excluding Wells B-6-1 and B-14)  
 EXPOSURE TYPE : INGESTION/FUTURE/ADJACENT RESIDENT  
 RISK TYPE : NONCARCINOGENIC

3-19

Contaminant of Concern	Critical Effect/Target Organ (a)	Maximum Contaminant Level (MCL) (b) (mg/L)	Average Concentration (mg/L)	Maximum Concentration (mg/L)	Exposure Factor (c)	Average Ingested Dose (d) (mg/kg/day)	Maximum Ingested Dose (e) (mg/kg/day)	Chronic Protective Body Dose (mg/kg/day)	Average Hazard Quotient	Maximum Hazard Quotient
Benzene		5.00E-03	1.56E-03	4.50E-03	2.74E-02	3.00E-05	1.23E-04	1.70E-03	2E-02	7E-02
Chlorobenzene		1.00E-01	1.64E-03	4.60E-03	2.74E-02	3.15E-05	1.26E-04	2.00E-02	2E-03	5E-03
Chloroethane		--	8.15E-03	5.00E-02	2.74E-02	1.56E-04	1.37E-03	4.00E-01	4E-04	3E-03
1,2-Dichlorobenzene		6.00E-01	6.70E-04	6.70E-04	2.74E-02	1.29E-05	1.84E-05	9.00E-02	1E-04	2E-04
1,4-Dichlorobenzene		7.50E-02	1.19E-03	2.70E-03	2.74E-02	2.28E-05	7.40E-05	2.30E-01	1E-04	3E-04
1,1-Dichloroethane		--	4.97E-03	1.70E-02	2.74E-02	9.54E-05	4.66E-04	1.00E-01	1E-03	5E-03
1,2-Dichloroethane (cis)		7.00E-02	2.90E-03	1.40E-02	2.74E-02	5.57E-05	3.84E-04	1.00E-02	6E-03	4E-02
Ethylbenzene		7.00E-01	5.30E-04	5.30E-04	2.74E-02	1.02E-05	1.45E-05	1.00E-01	1E-04	1E-04
Isopropyl Benzene		--	7.00E-04	8.70E-04	2.74E-02	1.34E-05	2.38E-05			
Methylene Chloride		5.00E-03	9.00E-04	2.20E-03	2.74E-02	1.73E-05	6.03E-05	6.00E-02	3E-04	1E-03
Naphthalene		--	9.50E-04	5.60E-03	2.74E-02	1.82E-05	1.53E-04	4.00E-02	5E-04	4E-03
Toluene		1.00E+00	7.10E-04	8.80E-04	2.74E-02	1.36E-05	2.41E-05	2.00E-01	7E-05	1E-04
1,2,4-Trimethylbenzene		--	8.30E-04	2.40E-03	2.74E-02	1.59E-05	6.58E-05	5.00E-02	3E-04	1E-03
Vinyl Chloride		2.00E-03	2.15E-03	1.10E-02	2.74E-02	4.13E-05	3.01E-04			
Xylenes (Total)		1.00E+01	7.00E-04	1.10E-03	2.74E-02	1.34E-05	3.01E-05	2.00E+00	7E-06	2E-05
PCBs		5.00E-04	3.72E-03	1.20E-02	2.74E-02	7.14E-05	3.29E-04			
Aluminum		--	7.98E-02	1.30E-01	2.74E-02	1.53E-03	3.56E-03			
Arsenic	skin/vascular system	5.00E-02	1.53E-02	3.10E-02	2.74E-02	2.93E-04	8.49E-04	3.00E-04	1E+00	3E+00
Barium	inc. blood pressure	2.00E+00	1.68E+00	4.04E+00	2.74E-02	3.22E-02	1.11E-01	7.00E-02	5E-01	2E+00
Cadmium		5.00E-03	2.58E-03	6.50E-03	2.74E-02	4.95E-05	1.78E-04	5.00E-04	1E-01	4E-01
Chromium (VI)		1.00E-01	8.83E-03	5.82E-02	2.74E-02	1.70E-04	1.59E-03	5.00E-03	3E-02	3E-01
Cobalt		--	4.67E-02	1.02E-01	2.74E-02	8.96E-04	2.80E-03			
Copper		1.30E+00	1.28E-02	4.73E-02	2.74E-02	2.46E-04	1.30E-03			
Iron		--	1.03E+01	2.30E+01	2.74E-02	1.98E-01	6.29E-01			
Lead		1.50E-02	1.93E-03	1.06E-02	2.74E-02	3.71E-05	2.90E-04			
Manganese	CNS	--	7.83E-01	1.48E+00	2.74E-02	1.50E-02	4.05E-02	2.40E-02	6E-01	2E+00
Nickel		1.00E-01	2.45E-02	5.05E-02	2.74E-02	4.70E-04	1.38E-03	2.00E-02	2E-02	7E-02
Vanadium		--	5.50E-03	5.50E-03	2.74E-02	1.06E-04	1.51E-04	7.00E-03	2E-02	2E-02
Zinc		--	7.18E-02	3.23E-01	2.74E-02	1.38E-03	8.85E-03	3.00E-01	5E-03	3E-02

HAZARD INDEX	2E+00	7E+00
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-- Not available  
 a Critical effect/target organ listed only for contaminants with hazard quotients greater than 1 E-01.  
 b U.S. EPA, Office of Water, Drinking Water Regulations and Health Advisories. December 1993.  
 c Exposure Factor for RME = (2 liters/day \* 350 days/year \* 30 years)/(70 kg \* 30 years \* 365 days/year) = 2.74 E-02  
 Exposure Factor for Central Tendency = (1.4 liters/day \* 350 days/year \* 9 years)/(70 kg \* 9 years \* 365 days/year) = 1.92 E-02  
 d Ingested Dose = Average Concentration \* Central Tendency Exposure Factor  
 e Ingested Dose = Maximum Concentration \* RME Factor

APPENDIX D

State of Vermont Concurrence Letter

Department of Fish and Wildlife  
Department of Forests, Parks and Recreation  
Department of Environmental Conservation  
State Geologist  
Burlington, Vermont  
Telephone: 802-241-3800  
Fax: 802-241-3296

AGENCY OF NATURAL RESOURCES  
Department of Environmental Conservation  
Commissioner's Office  
103 South Main Street / West Building  
Waterbury, Vermont 05671-0404  
802-241-3800  
FAX 802-241-3296

September 24, 1998

Mary Jane O'Donnell, Chief, ME/VT/CT Superfund Section  
Office of Site Remediation and Restoration  
U.S. Environmental Protection Agency, Region 1  
J.F. Kennedy Federal Building  
Boston, Massachusetts, 02203-0001

RE: Concurrence with Record of Decision (ROD) for Bennington Landfill Superfund Site  
Bennington, VT (Site #77-0002)

Dear Mary Jane:

The State of Vermont concurs with the **Record of Decision (ROD)** proposed by the Environmental Protection Agency (EPA) for the Bennington Landfill Superfund Site. This concurrence is based on input from my staff, who have reviewed the *draft Record of Decision* dated September 1989. The ROD summarizes the remedy that is on-going under a non-time critical removal action (NTCRA), which should be completed in November 1998. The ROD proposes that no further action, except monitoring, will be required at the site after the NTCRA is completed. The NTCRA consists of the following:

- A Multi-Barrier Cap Over the Landfill Area;
- An upgradient diversion trench;
- A leachate collection system;
- Institutional Controls, such as groundwater classification, deed restrictions, and access controls;
- Long-term Monitoring;
- Five-Year Review; and

The State of Vermont believes that the no further action remedy, in conjunction with the NTCRA, is protective of human health and the environment and meets all state requirements that are applicable to remedial action. Based on the Consent Degree, the EPA will monitor groundwater, surface water, and sediment monitoring in years 1 through 10, and the State of Vermont will perform the monitoring in years 11 through 30.

(Over)

Groundwater at this Superfund Site is in the process of being reclassified to a Class IV, that is non-potable groundwater. The groundwater reclassification should be finalized within the next two weeks. I appreciate the work that you and your staff, particularly Ed Hathaway, have done to develop this remedy and to keep the DEC involved during the NTCRA. If you need additional information on the State's position concerning the ROD, please do not hesitate to contact me, George Desch, or John Schmeitzer of my staff.

Sincerely,



Camute Dalmasse, Commissioner  
Department of Environmental Conservation

cc: George Desch, Department of Environmental Conservation  
John Schmeitzer, Department of Environmental Conservation

js/770002/benrod.com

APPENDIX E

Public Hearing Transcript

PUBLIC HEARING

FOR THE

FINAL SUPERFUND ACTION

AT

BENNINGTON LANDFILL SUPERFUND SITE

AUGUST 11, 1998

BENNINGTON, VERMONT



**Reporting Service**

PO Box 310  
Guilderland, NY 12084-0310

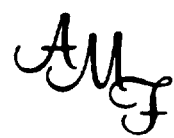
TEL: (518) 452-1795

FAX: (518) 869-7861

TOLLFREE: (877)NYS-DEPO

1 MARY JANE O'DONNELL: Good evening,  
2 folks, we might as well get started. I would like to  
3 welcome you to tonight's meeting on the public hearing  
4 on the Bennington Landfill. We'll start off with  
5 introductions. My name is Mary Jane O'Donnell, I work  
6 for the Environmental Protection Agency in Boston,  
7 Section Chief in that office. And a couple of other  
8 folks are here. Ed Hathaway, Ed also works for the  
9 EPA, he's the Project Manager for this particular site.  
10 Some folks are here from the state that I wanted to  
11 acknowledge: John Schmeltzer, Elizabeth Hunt and Don  
12 Robisky, and the role that they will play in this  
13 project is going to be explained in his talk.

14 The purpose of tonight's meeting is to  
15 formally accept folks' comments on our cleanup decision  
16 or lack of cleanup decision to do any further work with  
17 the groundwater at the Bennington landfill site. There  
18 are two ways that people can formally comment on this  
19 decision. One way is to make a statement at tonight's  
20 meeting. The second way is to submit written comments  
21 to the EPA by the close of our comment period which I  
22 believe is August 21st. What we will do with those  
23 comments is, first of all, we will review them and  
24 secondly, use them to make improvements upon decisions



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1 that we have made already to see if there needs to be  
2 any changes.

3 In terms of tonight's meeting, a couple  
4 of things are going to happen. Ed is going to give a  
5 presentation similar to the one he gave at the July  
6 21st meeting, and I think it's going to be a shorter  
7 version. And he's going to discuss some of the studies  
8 we have done in the past and our rationale for where we  
9 are today and why we made our decision that we are  
10 presenting tonight.

11 Upon concluding that, we will open the  
12 floor to any comment from anyone in the audience who  
13 might have a question. As you can see, the meeting is  
14 being transcribed and we will be responding in writing,  
15 as I said, to any comments that are made here tonight.

16 Because this is a public  
17 hearing, it's somewhat formal in the sense that we  
18 won't be in a position to answer questions that folks  
19 might have as a result of Ed's presentation or anything  
20 that anyone else says in tonight's meeting. However,  
21 we will be more than happy to stay after the meeting to  
22 answer the questions that people might have. With that  
23 as the background, I'm going to turn things over to Ed  
24 for him to give his presentation.

1 EDWARD HATHAWAY: Okay, once again,  
2 welcome. The purpose of tonight's meeting is to  
3 provide the opportunity for the public to offer formal  
4 comments regarding the EPA proposed final Superfund  
5 Action for the Bennington landfill site. All comments  
6 will be recorded as part of the hearing. And any  
7 questions that you may have, as Mary Jane mentioned, we  
8 will try to answer afterwards. In addition, we have  
9 people here from the Vermont DEC to entertain questions  
10 regarding the reclassification of the groundwater.

11 We are talking about the Bennington  
12 Landfill located at Bennington, Vermont, just off of  
13 Houghton Lane. There is a transfer station there right  
14 now and Audry Lane (phonetic) and AutoMakers are over  
15 there, just for anyone who is looking to orient  
16 themselves.

17 Just so you are aware, everyone should  
18 have a copy of tonight's overheads. The EPA contacts  
19 for the site are myself, Edward Hathaway, there's an  
20 address, phone number, fax number, and E-mail address;  
21 in addition, Sarah White, our community involvement  
22 coordinator, and information regarding her is also  
23 presented there.

24 As Mary Jane mentioned, the Vermont DEC



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1 project manager, John Schmeltzer, his name and number  
2 are here, as is the Town of Bennington contact, Stuart  
3 Hurd. Feel free to contact any of the individuals with  
4 any questions you may have.

5 For any site information that you may  
6 want to review regarding this site, at the office of  
7 the town manager right here in Bennington, we have a  
8 complete record of all the files regarding the site and  
9 also in downtown Boston at the EPA Record Center. If  
10 you have any trouble getting information regarding the  
11 site, please give myself, Sarah, or John Schmeltzer a  
12 call.

13 Just in the way of background, the site  
14 is an approximately 15-acre solid waste landfill.  
15 There is a transfer station that is currently located  
16 at the site that is now being used by the town to the  
17 white goods (phonetic) area, stump dump area. The  
18 landfill itself was operated from 1969 to 1987.  
19 Industrial waste, liquid industrial waste in  
20 particular, was disposed there from 1969 to 1975, and  
21 that was called the lagoon.

22 They installed an underdrain system, a  
23 drainage system for part of the landfill in 1986. In  
24 1989, the landfill was closed under the Vermont Solid



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1 Waste Closure Program. It was placed on the EPA  
2 National Superfund List in 1989. Superfund  
3 investigations began in 1991 to get through 1997. The  
4 first cleanup decision was made in 1994, and the work  
5 in that cleanup decision began last year.

6 To provide a better understanding of the  
7 flow chart for the site, this flow chart here provides  
8 the landfill operational history, when the site was  
9 closed, when we began work at the site.

10 And then the site was split into two  
11 components. One is what we call a source control  
12 component where that was the cleanup decision in 1994  
13 which went through a design process and is now under  
14 construction. There was also a groundwater component,  
15 studying the groundwater, assessing how bad the  
16 groundwater is, and the need to do any additional  
17 cleanup work. And the time line for that is presented  
18 here in the left-hand column.

19 As you will note here, the summer of  
20 1998, the proposed plan, is public comment. That is  
21 the purpose of tonight's meeting, is to seek public  
22 comment upon our groundwater proposal.

23 For additional background information,  
24 the results of those investigations that took place



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1 between 1991 and 1997 confirm the landfill is the  
2 primary source of groundwater sediment contamination.

3 We originally found high levels of PCB's  
4 in a drainage pond right adjacent to the landfill.  
5 They discovered there are two groundwater systems at  
6 the site. The shallow system is mostly a sand and  
7 gravel unit. The shallow system is also the most  
8 contaminated. The shallow system also discharges to a  
9 wetland that feeds Hewitt Brook, and I'll show you that  
10 in a second.

11 The deep groundwater system is both a  
12 bedrock and a sand and gravel unit. It's under a very  
13 tight restrictive layer that does not allow interaction  
14 between the shallow and the deep systems. We have  
15 found low levels of contamination in the deep system,  
16 but they have always been below acceptable drinking  
17 water standards. For more information regarding all  
18 these investigations, we'll refer you to the Rabeto  
19 (phonetic) Investigation Report, which is at the  
20 information repositories that I previously mentioned.

21 To give you a sense of what I was trying  
22 to describe, if you look at the landfill here, we have  
23 a shallow groundwater system that is basically water  
24 flowing above this dry till unit, that flows in the



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1 sand and gravel and eventually discharges into a  
2 wetland at Hewitt Brook. We also have the deep system  
3 down here that's in the bedrock in this lower sand and  
4 gravel unit.

5 I also want to show briefly the type of  
6 work we are doing right now. We put in an upgradient  
7 diversion trench, to prevent any water from coming in  
8 under the landfill. We have excavated that highly  
9 contaminated PCB area and placed it under the landfill.  
10 We have intercepted the leachate that was exiting the  
11 landfill, treated it in a groundwater treating plant,  
12 and are discharging it back into the groundwater at  
13 drinking water standards, very clean. We are also in  
14 the process of putting a cap over this entire landfill  
15 that will prevent any water from getting into it.

16 I also wanted to show the area that  
17 we're talking about more specifically tonight which is  
18 an area of groundwater contamination that emanates from  
19 the landfill directly into the adjacent wetlands at  
20 Hewitt Brook.

21 Critical to note is that the  
22 contamination does not leave the property, it  
23 totally -- completely discharges to the Hewitt wetland  
24 area, and it stops short of any residential areas.



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1                   Based upon all the studies and  
2 investigations that were done, EPA issued a what's  
3 called a proposed plan, a fact sheet describing its  
4 proposed course of action. Back over a month ago, we  
5 said, we don't believe any further cleanup action is  
6 necessary except for long-term monitoring of the  
7 situation. The reason we made this proposal was that  
8 the previous approved cleanup actions, what we're  
9 doing out there right now, we believe will adequately  
10 control all the contamination at the site, that there  
11 is no groundwater contamination outside the property  
12 owned by the Town of Bennington, that deed restrictions  
13 and reclassification of the groundwater will prevent  
14 any future use of the contaminated groundwater.

15                   And that, in addition, when you assess  
16 the potential adverse health effects, if you were to  
17 drink the contaminated ground water on a scale of, you  
18 know, good to really bad, it kind of comes out in the  
19 middle, it's not horrible. It's something that if  
20 someone were to come in contact with that for a short  
21 period of time, it wasn't going to kill them. Now,  
22 critical to note is we are not going to allow that to  
23 happen because we are going to restrict the groundwater  
24 and it's actually going to bring itself up over time.



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1                   What are these previously approved  
2 cleanup actions that I'm talking about? Well, in 1994,  
3 EPA initiated what's called a Non-Time-Critical Removal  
4 Action. We sought public comment on that in July and  
5 August of 1994. And as of 1997, an agreement was in  
6 place under which a group of responsible parties are  
7 undertaking that work to clean up the site.

8                   The major components of that work are  
9 excavation of all soils and sediments with  
10 polychlorinated biphenyls, PCB's, above one part per  
11 million. This was completed in May of 1998.

12                   The collection and treatment of leachate  
13 that was discharging from the landfill through an  
14 underdrain system: The treatment system was completed  
15 in December, '97, and since then we have been  
16 collecting and treating the water and discharging it  
17 below drinking water standards -- cleaner than drinking  
18 water standards.

19                   The interception of upgradient  
20 groundwater and surface water and diversion of that  
21 water around the landfill: What we mean by that is  
22 that water, clean water, that was flowing downhill and  
23 previously flowing under the landfill picking up  
24 contamination and flowing out into the groundwater



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1 contamination area, is now being diverted around the  
2 landfill so that the amount of water that enters the  
3 area under the landfill that's contaminated has been  
4 significantly reduced by this action, and also will be  
5 extremely reduced by the cap that's being placed on the  
6 landfill. As I just mentioned, the installation of a  
7 multi-barrier landfill cap over all the waste material  
8 was begun in May, 1998 and was expected to be completed  
9 in November. In addition to those physical activities,  
10 institutional controls which include deed restrictions,  
11 which is essentially the Town of Bennington placing a  
12 permanent restriction on the use of that property that  
13 says that property can never be residentially  
14 developed, you can never damage the cap, and you can  
15 never use the groundwater for residential drinking  
16 water purposes. In addition to that, the  
17 reclassification of the groundwater by the Vermont DEC  
18 also assures that no one can drill a well in that water  
19 and use it for any drinking water purposes.

20 Just to give you an idea of what I mean  
21 by the multi-barrier cap, the cap we're building on the  
22 landfill has multiple layers. It has over two feet of  
23 soil on top of it to allow it to grow a good grass  
24 cover. It's got two barrier layers, which is why we



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1 call it a multi-barrier. It's got a big sheet of  
2 plastic over the entire landfill. And it's got a small  
3 panel of clay that basically stops anything that gets  
4 through the plastic from going any further because the  
5 clay swells up and seals the hole. Below that we have  
6 a gas ventilator that controls the release of any gas  
7 that builds up against the bottom of the cap.

8 This figure right here shows the area of  
9 property that is owned by the Town of Bennington, but  
10 is being subject to the deed restrictions. And it's  
11 also the same property that is subject to the  
12 institutional controls that will prevent both future  
13 use of groundwater, future use from a development  
14 perspective, and future use from any installation of  
15 drinking water wells.

16 So what was the effect of the previous  
17 cleanup action, what we call the NTCRA? The placement  
18 of the PCB contaminated soils and sediments under the  
19 cap prevented any contact with those materials,  
20 therefore, they are no longer a threat.

21 As I mentioned, the upgradient diversion  
22 system prevents clean water from flowing under the  
23 landfill and mixing with contaminated material.

24 The leachate collection and treatment



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1 system stopped the discharge of contaminated water into  
2 the wetlands. It takes that water and cleans it up and  
3 puts it back into the groundwater clean.

4 The multi-barrier cap prevents any  
5 future contact with any of the waste material. We have  
6 got a several foot thick barrier that prevents any  
7 contact. It also significantly reduces the amount of  
8 water that could possibly enter the landfill to create  
9 any additional contamination. As I mentioned, the deed  
10 restrictions and groundwater reclassification will  
11 assure that no one uses that water for long distances  
12 into the future.

13 And what we believe is, in addition, all  
14 the items we talked about are controlled technologies:  
15 The cap, the leachate collection system, the diversion  
16 system. They are all going to work together to  
17 substantially improve the groundwater quality at the  
18 landfill. And we believe at some point in time in the  
19 not too distant future, the groundwater will actually  
20 be cleaned.

21 When we made the decision to implement  
22 all those actions I just talked about, we did not  
23 include in that a decision as to whether the  
24 groundwater away from the landfill needed to be cleaned



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1 up by itself. We postponed that decision until now.  
2 So the EPA, after that, did an evaluation by assessing  
3 the potential adverse health effects from exposure to  
4 the contaminated groundwater.

5 Potential is the key word here because,  
6 as I mentioned, we don't believe anyone could ever come  
7 in contact with that groundwater because of the deed  
8 restrictions and the reclassification. But we needed  
9 to assess that just in case it ever did happen.

10 To perform that assessment, we completed  
11 documents known as risk assessments. We've done three  
12 of them at the site. They were done in different  
13 scenarios. The most recent one is Risk Assessment 3 in  
14 February of '98, based upon all the latest desk  
15 information that the EPA has available on how to  
16 estimate groundwater exposure risks.

17 The first risk assessment was used to --  
18 say we needed to do the landfill cap. The second and  
19 third risk assessments really focused on what level of  
20 risk might exist to the consumption of the groundwater.  
21 And I guess the critical factor here is that the level  
22 of risk from drinking two liters of the most  
23 contaminated groundwater at the site near the landfill  
24 would be what essentially is called five times ten to



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1 the -- it's actually negative four, or it's five --  
2 potential for five additional cancer cases per ten  
3 thousand.

4           Nationally, EPA believes that an action  
5 should be taken whenever a risk is substantially  
6 greater than one times ten of the four. And when you  
7 split it between one times ten of the four, to nine  
8 times ten of the four, you're really in the range that  
9 warrants further evaluation as to what the mitigating  
10 factors are, like potential groundwater use.

11           And the other factors that we considered  
12 at this site were the fact that the groundwater quality  
13 will improve as a result of the actions we have already  
14 taken. And that deed restrictions and reclassification  
15 will effectively prevent any use of this groundwater  
16 into the future.

17           So, therefore, based upon all the work  
18 we've done to date, all the cleanup actions that we're  
19 taking right now, the fact that no one could possibly  
20 use the groundwater, and that it's also going to clean  
21 up over time, the EPA believes that no further action  
22 in addition to the substantial work that's been done  
23 out there is necessary. So we're proposing to close  
24 out the site with a proposal for 30 years of long-term



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1 monitoring. And the cost of this is \$1.5 million  
2 dollars.

3 The period from July 22nd to August 21st  
4 is a critical time period. Any member of the community  
5 is free to offer comment both tonight and in writing to  
6 the EPA before August 21st. Tonight is the public  
7 hearing. We encourage the public to comment, whether  
8 it be positive or negative, about our proposed action.  
9 As was mentioned earlier, for tonight, if you want to  
10 make a comment, all you need to do is when I am done, I  
11 will announce the comment portion is open, stand up,  
12 introduce yourself, provide whatever comment you have  
13 to EPA, it will be recorded. And then we will respond  
14 to those in writing as part of our decision document.

15 If you only have questions about what we  
16 are doing, wait until the comment period closes and we  
17 will be glad to answer whatever questions you have. I  
18 also want to remind you that any information you may  
19 want about the site is available at the Bennington Town  
20 Office or the EPA Record Center. I also want to remind  
21 you that attached to the handout is the addresses and  
22 names to send any comments that you may have.

23 Now, there's a second purpose to  
24 tonight's meeting from a formal perspective, and that



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1 is to provide an opportunity for any comments the  
2 public may want to provide regarding groundwater  
3 reclassification. And I will introduce Don Robisky  
4 from the State of Vermont to briefly discuss the  
5 Vermont reclassification.

6 DONALD ROBISKY: I am Don Robisky, and I  
7 work for the Vermont Department of Environmental  
8 Conservation. As Ed has explained, part of the  
9 proposal for no further action on this site is that  
10 there will be institutional controls over the  
11 groundwater under the landfill and directly  
12 downgradient of it.

13 And there are two institutional controls  
14 that the State of Vermont has agreed to participate in.  
15 The first is the environmental easement which the Town  
16 of Bennington has granted to the State of Vermont and  
17 for their property which includes everything you see in  
18 the shaded area, the parcel -- there are two parcels,  
19 one is the landfill and one is the downgradient portion  
20 here where there is some contaminated groundwater,  
21 which is defined by this small line here.

22 What this means is that no one can do  
23 anything on this site which would in any way impair the  
24 remedy that's already been put in place, or to in any



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1 way extract or even come in contact with the  
2 groundwater without the State of Vermont's permission.  
3 So this assures the public that the Town of Bennington  
4 or any future owner of this site, should that happen,  
5 could not simply go out on the site and do anything  
6 with the landfill or the groundwater.

7 The second portion that was mentioned is  
8 the reclassification. And what that is is the Town of  
9 Bennington, who is the owner of the property,  
10 petitioned the State of Vermont to reclassify the  
11 groundwater both under the landfill and directly  
12 downgradient. And it's the entire shaded area as shown  
13 here as Class IV.

14 Class IV waters, groundwaters, are not  
15 considered suitable for drinking purposes. And in any  
16 permitting action that the state might have under it's  
17 jurisdiction, the state would not be allowed to permit  
18 anybody to extract that ground water and use it.

19 So with these two constraints and the  
20 reclassification -- this hearing is also a hearing on  
21 reclassification, EPA has been gracious enough to let  
22 us share their time for that purpose. And we are  
23 holding open our comment period through the end of this  
24 month. But having reviewed the application from the



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1 Town of Bennington, the department does propose to  
2 reclassify this groundwater as Class IV. But we will  
3 consider any commentary we receive through the end of  
4 the month. And I think that's everything about the  
5 institutional controls.

6 EDWARD HATHAWAY: With that, we close  
7 the comment process and I'll reintroduce Mary Jane  
8 to --

9 MARY JANE O'DONNELL: We will open  
10 things again for the comments that folks might have.  
11 If you have any formal comments on our proposed  
12 decision not to do any further action with the  
13 Bennington landfill and the reclassification that Don  
14 mentioned, please come forward, state your name, and  
15 please feel free to comment at that point. Would  
16 anyone like to come forward? Don.

17 DONALD ROBISKY: I'm Don Robisky with  
18 the Vermont Department of Environmental Conservation.  
19 And for the record, I would like to state the State of  
20 Vermont does support the proposal of EPA for no further  
21 action on this site. We have reviewed all the tenable  
22 information and agree with the case findings.

23 MARY JANE O'DONNELL: Thanks, Don. Is  
24 there anyone else who would like to make comments?



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Seeing that there aren't any additional comments, the public part of the meeting is closed.

(Whereupon, the public meeting concluded at 7:35 p.m.)



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C E R T I F I C A T I O N

I, CANDEE A. DOTSON, a Shorthand Reporter and Notary Public in and for the State of New York, do hereby certify that the foregoing record taken by me at the time and place as noted in the heading hereof is a true and accurate transcript of the same to the best of my ability and belief.

  
CANDEE A. DOTSON

Dated: August 11, 1998



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APPENDIX F

RESPONSIVENESS SUMMARY

## I. Introduction:

This document summarizes the community involvement activities implemented by EPA at the Bennington Landfill Superfund Site. EPA held a public comment period from July 21, 1998 through August 20, 1998 regarding a Proposed Plan that recommended No Further Action at the Bennington Landfill Superfund Site. The basis for the No Further Action proposal was that the extensive activities implemented as part of the non-time-critical removal action (NTCRA) have resolved all Site risks. The NTCRA included: the excavation of PCB contaminated soils and sediments; placement of a multi-barrier cap over the landfill; collection and treatment of the leachate; diversion of upgradient groundwater; and institutional controls to prevent future use of the Site and the contaminated groundwater. The Administrative Record for the Site contains all of the relevant supporting information to support the No Further Action decision. The Administrative Record is available at the EPA Record Center at 90 Canal Street in Boston, Ma and at the Office of the Town Manager in Bennington, VT

## II. Community Involvement Opportunities

Throughout the Site's history, community concern and involvement has been low. EPA has kept the community and other interested parties apprized of the Site activities through informational meetings, fact sheets, press releases and public meetings.

During April 1992, EPA released a community relations plan which outlined a program to address community concerns and keep citizens informed about and involved in activities during remedial activities.

On July 14, 1994 EPA released a fact sheet describing a proposed early cleanup action at the Site. On July 21, 1994 EPA held a public meeting to present a proposed early response action at the Site and to provide an update with respect to the results of the RI/FS. The early response action involved the use of EPA's NTCRA authority to control the source of the contamination at the Site. EPA held a 30-day public comment period regarding the proposed NTCRA from August 15, 1994 to September 15, 1994. EPA held a public hearing on September 13, 1994. An Action Memorandum documenting the selection of the NTCRA and including a Response to Comments was signed December 19, 1994.

A public information fact sheet was released in September 1997 to describe the NTCRA after completion of the design phase and in anticipation of the construction activities. The September 1997 fact sheet also provided an update of the RI/FS. A public meeting was held in September 1997 to answer any questions regarding Site activities. Another fact sheet was released in May 1998 to further update the NTCRA construction program and the RI/FS activities.

On July 20, 1998, EPA made the administrative record available for public review at EPA's offices in Boston and at the Bennington Town Manager's Office. EPA published a notice and brief analysis of the Proposed Plan in the Bennington Banner on July 8, 1998 and made the plan available to the public at the Bennington Town Manager's Office.

On July 21, 1998 EPA held an informational meeting to discuss the results of the Remedial Investigation and to present the Agency's Proposed Plan. Also during this meeting, the Agency answered questions from the public. From July 22, 1998 to August 21, 1998, the Agency held a 30-day public comment period to accept public comment on the alternatives presented in the Proposed Plan and on any other documents previously released to the public.

On August 11, 1998 the Agency held a public meeting to discuss the Proposed Plan and to accept any oral comments. EPA sent a notice of the public hearing to the Site mailing list in addition to an announcement in the local newspaper. Only 1 member of the public attended the public hearing and no public comment was offered.

No public comments were received at the public hearing or during the comment period. The State of Vermont indicated an intent to concur with the proposed action during the August 11 public hearing.

### III. RESPONSE TO COMMENTS

EPA acknowledges the statements made by the VT DEC at the public hearing expressing the intent of VT DEC to concur with the remedy.

No response to comments is provided as no comments were received.

APPENDIX G

ADMINISTRATIVE RECORD INDEX

03.06 REMEDIAL INVESTIGATION - REMEDIAL INVESTIGATION REPORTS

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Title: Final Draft, Remedial Investigation Report,  
Bennington Landfill Site, Burlington, Vermont,  
Vols. I-XI and Supplement.  
Addressee: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Authors: MCLAREN/HART ENVIRONMENTAL ENGINEERING  
Date: February 14, 1997  
Format: REPORT, STUDY  
AR No. 03.06.1 Document No. 000001

---

Title: Approval of the Remedial Investigation Report  
Submitted by de maximis, inc. on February 14,  
1997.  
Addressee: GEOFFREY SIEBEL - DE MAXIMIS, INC.  
Authors: MARY JANE O'DONNELL - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Date: December 23, 1997  
Format: LETTER No. Pgs: 1  
AR No. 03.06.2 Document No. 000002

03.09 REMEDIAL INVESTIGATION - HEALTH ASSESSMENTS

---

Title: Final Risk Assessment, Bennington Landfill,  
Bennington, VT.  
Addressee: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Authors: TRC COMPANIES, INC.  
Date: June 1995  
Format: REPORT, STUDY  
AR No. 03.09.1 Document No. 000003

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Title: Risk Assessment Addendum for Overburden  
Groundwater, Bennington Landfill Superfund Site,  
Bennington, Vermont.  
Addressee: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Authors: TRC COMPANIES, INC.  
Date: June 1997  
Format: REPORT, STUDY No. Pgs: 50  
AR No. 03.09.2 Document No. 000004

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ADMINISTRATIVE RECORD INDEX  
BENNINGTON LANDFILL

03/23/99  
Page 4

Title: 100 Percent Design Report, Non-Time-Critical  
Removal Action, Vols I-III, with Engineering  
Drawings [Available at EPA Records Center].  
Addressee: BENNINGTON PERFORMING PARTIES  
Authors: DAMES & MOORE  
Date: June 1998  
Format: REPORT, STUDY  
AR No. 06.04.4 Document No. 000010

---

Title: Conditional Acceptance of the Proposed Field  
Change Requests.  
Addressee: GEOFFREY SIEBEL - DE MAXIMIS INC  
Authors: EDWARD HATHAWAY - US EPA REGION 1  
Date: June 19, 1998  
Format: LETTER No. Pgs: 1  
AR No. 06.04.5 Document No. 000022

---

**07.02 REMEDIAL ACTION - SAMPLING & ANALYSIS DATA**

Title: Long-Term Monitoring Plan, Sampling Results,  
Spring 1997, Bennington Municipal Landfill Site,  
Bennington, Vermont.  
Addressee: US EPA REGION 1  
Authors: MCLAREN/HART ENVIRONMENTAL ENGINEERING  
Date: August 19, 1997  
Format:  
AR No. 07.02.1 Document No. 000011

---

**07.05 REMEDIAL ACTION - REMEDIAL ACTION REPORTS**

Title: Construction Oversight Findings for 1997,  
Bennington Municipal Landfill, Bennington,  
Vermont.  
Addressee: EDWARD HATHAWAY - US EPA REGION 1  
Authors: TRC COMPANIES INC  
Date: February 1998  
Format: REPORT, STUDY No. Pgs: 28  
AR No. 07.05.1 Document No. 000012

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ADMINISTRATIVE RECORD INDEX  
BENNINGTON LANDFILL

09/29/98  
Page 3

05.04 RECORDS OF DECISION - RECORD OF DECISION

---

Title: Record of Decision.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: September 29, 1998  
Format:  
AR No. 05.04.1 Document No. 000028

---

06.04 REMEDIAL DESIGN - REMEDIAL DESIGN REPORTS

---

Title: Conditional Approval for the Pilot Test Portion  
of the Leachate Collection and Treatment System  
(LCTS) Design.  
Addressee: GEOFFREY SIEBEL - DE MAXIMIS, INC.  
Authors: MARY JANE O'DONNELL - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Date: November 26, 1997  
Format: LETTER No. Pgs: 5  
AR No. 06.04.1 Document No. 000007

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Title: Approval of the Final Design for the Landfill  
Cap, Groundwater Interceptor Trench, etc., and  
Conditional Approval of the LCTS.  
Addressee: GEOFFREY SIEBEL - DE MAXIMIS, INC.  
Authors: MARY JANE O'DONNELL - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Date: April 21, 1998  
Format: LETTER No. Pgs: 3  
AR No. 06.04.2 Document No. 000008

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---

Title: Comments on Proposed Field Change Requests 1-10.  
Addressee: GEOFFREY SIEBEL - DE MAXIMIS, INC.  
Authors: EDWARD HATHAWAY - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Date: April 29, 1998  
Format: LETTER No. Pgs: 1  
AR No. 06.04.3 Document No. 000009

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ADMINISTRATIVE RECORD INDEX  
BENNINGTON LANDFILL

09/29/98  
Page 4

Title: 100 Percent Design Report, Non-Time-Critical  
Removal Action, Vols I-III, with Engineering  
Drawings [Available at EPA Records Center].  
Addressee: BENNINGTON PERFORMING PARTIES  
Authors: DAMES & MOORE  
Date: June 1998  
Format: REPORT, STUDY  
AR No. 06.04.4 Document No. 000010

---

Title: Conditional Acceptance of the Proposed Field  
Change Requests.  
Addressee: GEOFFREY SIEBEL - DE MAXIMIS, INC.  
Authors: EDWARD HATHAWAY - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Date: June 19, 1998  
Format: LETTER No. Pgs: 1  
AR No. 06.04.5 Document No. 000022

---

**07.02 REMEDIAL ACTION - SAMPLING & ANALYSIS DATA**

---

Title: Long-Term Monitoring Plan, Sampling Results,  
Spring 1997, Bennington Municipal Landfill Site,  
Bennington, Vermont.  
Addressee: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Authors: MCLAREN/HART ENVIRONMENTAL ENGINEERING  
Date: August 19, 1997  
Format:  
AR No. 07.02.1 Document No. 000011

---

**07.05 REMEDIAL ACTION - REMEDIAL ACTION REPORTS**

---

Title: Construction Oversight Findings for 1997,  
Bennington Municipal Landfill, Bennington,  
Vermont.  
Addressee: EDWARD HATHAWAY - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Authors: TRC COMPANIES, INC.  
Date: February 1998  
Format: REPORT, STUDY No. Pgs: 28  
AR No. 07.05.1 Document No. 000012

---

**09.01 STATE COORDINATION - CORRESPONDENCE**

---

Title: Comments on Draft Post Removal Site Plan and  
Operation and Maintenance Manual for the Leachate  
and Treatment System.  
Addressee: EDWARD HATHAWAY - ENVIRONMENTAL PROTECTION  
AGENCY/REGION 1  
Authors: DONALD ROBISKY - VT DEPT. OF ENVIRONMENTAL  
CONSERVATION  
Date: December 31, 1997  
Format: LETTER No. Pgs: 3  
AR No. 09.01.1 Document No. 000013

---

**10.08 ENFORCEMENT/NEGOTIATION - EPA CONSENT DECREES**

---

Title: Administrative Order on Consent for Removal  
Action Design at the Bennington Landfill  
Superfund Site, EPA Region I Docket No.  
CERCLA-I-96-1014.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: November 22, 1996  
Format: MISCELLANEOUS  
AR No. 10.08.1 Document No. 000014

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Title: Consent Decree for U.S., State of Vermont v. Town  
of Bennington, Et Al.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: April 1997  
Format: MISCELLANEOUS  
AR No. 10.08.2 Document No. 000015

---

**11.14 POTENTIALLY RESPONSIBLE PARTIES - TITLE SEARCHES**

---

Title: Grant of Environmental Restrictions and Right of  
Access.  
Authors: TOWN OF BENNINGTON  
Date: July 1, 1998  
Format: MISCELLANEOUS No. Pgs: 14  
AR No. 11.14.1 Document No. 000026

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13.03 COMMUNITY RELATIONS - NEWS CLIPPINGS/PRESS RELEASES

---

Title: EPA Public Meeting to Discuss Proposed Cleanup  
Plan for the Bennington Landfill Superfund Site.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: July 13, 1994  
Format: FACT SHEET, PRESS RELEASE No. Pgs: 18  
AR No. 13.03.1 Document No. 000016

---

Title: Agreement Reached on Bennington Landfill  
Superfund Site, Public Comment Invited.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: July 15, 1997  
Format: FACT SHEET, PRESS RELEASE No. Pgs: 3  
AR No. 13.03.2 Document No. 000017

---

Title: Announcement of the Availability of the  
Administrative Record and Opportunity for the  
Public to Comment on the Proposed Plan for ...  
Bennington Lf.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: July 1, 1998  
Format: NEWS CLIPPING No. Pgs: 1  
AR No. 13.03.3 Document No. 000024

13.04 COMMUNITY RELATIONS - PUBLIC MEETINGS/HEARINGS

---

Title: Public Information Meeting for the Bennington  
Municipal Landfill Superfund Site.  
Date: September 17, 1997  
Format: PUBLIC MEETING RECORDS No. Pgs: 26  
AR No. 13.04.1 Document No. 000018

---

Title: EPA Meeting Sign Up Sheet.  
Date: September 17, 1997  
Format: PUBLIC MEETING RECORDS No. Pgs: 1  
AR No. 13.04.2 Document No. 000019

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ADMINISTRATIVE RECORD INDEX  
BENNINGTON LANDFILL

09/29/98  
Page 7

Title: Public Hearing for the Final Superfund Action at  
Bennington Landfill Superfund Site.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: August 11, 1998  
Format: PUBLIC MEETING RECORDS No. Pgs: 21  
AR No. 13.04.3 Document No. 000027

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13.05 COMMUNITY RELATIONS - FACT SHEETS/INFORMATION UPDATES

Title: Construction Activities Begin at the Bennington  
Municipal Landfill Superfund Site.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: September 1997  
Format: FACT SHEET, PRESS RELEASE No. Pgs: 10  
AR No. 13.05.1 Document No. 000020

---

Title: Progress Update: Construction Activities to  
Re-Start at the Bennington Municipal Landfill  
Superfund Site.  
Authors: ENVIRONMENTAL PROTECTION AGENCY/REGION 1  
Date: May 1998  
Format: FACT SHEET, PRESS RELEASE No. Pgs: 7  
AR No. 13.05.2 Document No. 000023

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