



**ON-SCENE COORDINATOR'S REPORT**

**EVOR PHILLIPS SITE**

**OLD BRIDGE, NJ**

**United States  
Environmental Protection  
Agency**

**NOVEMBER 1998**

**Emergency & Remedial Response Division**

**Region 2**

**Edison, New Jersey 08837**

**Removal Program**

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**OLD BRIDGE, NJ**

300007

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## LIST OF ACRONYMS USED IN THIS REPORT

BSM	New Jersey Department of Environmental Protection Bureau of Site Management
CAM	Chemical Agent Monitor
CAN	Community Alert Network
CJ	New Jersey Department of Criminal Justice
COE	United States Army Corps of Engineers
CONT	Contingency
CWA	Chemical Warfare Agents
DOD	Department of Defense
EM	Electro Magnetometer
EPA	United States Environmental Protection Agency
EPLC	Evor Phillips Leasing Company
ERCS	Emergency Response Cleanup Services
ERRD	Emergency and Remedial Response Division
ERT	Environmental Response Team
ETI	Earth Technologies Incorporated
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HAZMAT	Hazardous Materials
IAG	Inter-Agency Agreement
NAMCC	North American Metal and Chemical Company
NJDEP	New Jersey Department of Environmental Protection
NPL	National Priorities List
NJRB	New Jersey Remedial Branch
OEM	Office of Emergency Management
OSC	On Scene Coordinator
OU	Operable Unit
OVA	Organic Vapor Analyzer
PAT	Public Affairs Team
PPE	Personal Protective Equipment
QA/QC	Quality Assurance/Quality Control
RAB	Removal Action Branch
RCMS	Removal Cost Management System
REAC	Response Engineering and Analytical Contract
RI	Remedial Investigation
ROD	Record of Decision
Rps	Responsible Parties
Site	Evor Phillips Site
START	Superfund Technical Assistance and Response Team
TEU	Technical Escort Unit

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## I. EXECUTIVE SUMMARY

The Removal Action at the Evor Phillips Leasing Site (Site) was taken by the United States Environmental Protection Agency (EPA), Removal Action Branch (RAB), at the request of the New Jersey Department of Environmental Protection (NJDEP). The intent of the Removal Action was to locate and mitigate cylinders and/or drums potentially containing chemical warfare agents (CWA). These materials were allegedly buried within a 10,000 ft<sup>2</sup> area of this 5.77 acre Site as identified by a former employee of the facility. The Site is on the National Priorities List (NPL) and remediation of the remaining Site property is being performed by the Responsible Parties (RPs) under the direction of the NJDEP.

The Site is located in a mixed industrial and residential area on the border of Old Bridge Township near the Borough of Sayreville in Middlesex County, New Jersey. An extensive community relations plan was developed to appraise each of these communities of the EPA Removal Action. Due to the potential presence of CWA, numerous contingency measures were implemented to safeguard Site personnel as well as workers and residents in the surrounding community. These measures included an emergency notification system, a chemical resistant containment structure over the excavation area, mobile air treatment systems, cylinder overpacks, real time air monitoring and technical oversight by the Department of Defense (DOD) Technical Escort Unit (TEU). Emergency Management officials from Old Bridge, Sayreville, Middlesex County and the NJDEP were instrumental in the development, support and implementation of these contingency plans.

The Removal Action officially began on January 22, 1997 and was officially completed on August 15, 1997. The total cost of the Removal Action was \$639,083, of which \$425,583 was for the Emergency Response Cleanup Services Contractor (ERCS). Although no CWA were discovered during the Removal Action, 32 drums of waste, 300 laboratory size containers and 286 tons of contaminated soil were unearthed and subsequently disposed.

The EPA Site identification number for Evor Phillips Leasing is 92. The Comprehensive Environmental Compensation Liability Identification System number for this Site is NJD980654222. The ERCS contractor utilized in this Removal Action was Earth Technologies Incorporated (ETI) under contract number 68-S6-2101, delivery order number 2101-S6-007.

## **II. SITE HISTORY**

### **A. PHYSICAL LOCATION**

The Site is located in Old Bridge Township, Middlesex County, New Jersey and is 5.77 acre in size. The Site is bounded on the north and northwest by a Conrail railroad line and Bordentown Avenue, to the southeast by three industrial railroad lines, to the northeast by a service road connecting Bordentown Avenue and Old Water Works Road and to the southwest by a convergence of the industrial railroad lines and the Conrail track. The Site is approximately one mile west of U.S. Route 9 and 2.5 miles northwest of U.S. Route 18. Location maps and written directions from the EPA office in Edison to the Site have been included in Attachment A.

The Site is located within 1,000 feet of the CPS/Madison Superfund Site and other industrial facilities such as Forte Pallet, Lionetti Oil Recovery, BG&M and Jersey Billets Division of Easco Company. Three residences are located across the Conrail track approximately 750 feet northwest and down slope of the Site, along Bordentown Avenue in Sayreville. A larger residential area is located less than one mile from the Site to the northeast.

The surrounding area land use is also devoted to municipal potable water supply well fields. The cities of Perth Amboy and Sayreville both have water supply wells and ground water recharge ponds located within one mile of the Site. The Perth Amboy well field, located 5,000 feet from the Site, consists of four wells and serves approximately 55,000 people in Perth Amboy and South Amboy. The City of Sayreville well field consists of 12 wells serving approximately 33,000 people. The closest of these wells is approximately 3,000 feet from the Site. The location of these water supply wells with respect to the Site are depicted in a map included in Attachment A.

### **B. PAST SITE ACTIVITIES**

In the past 50 years this Site has been the location of numerous industrial businesses including a waste water treatment facility, a hazardous waste transfer station, an oil recovery operation, a fiberglass manufacturing plant and a precious metal reclamation business. At one time the Site contained at least six buildings, nineteen reclamation furnaces and two large, concrete lined, storage lagoons. All of these items were removed from the Site prior to this removal action with the exception of one small building in the north-east corner of the property which now contains the groundwater treatment equipment installed by the NJDEP. The Site has been inactive since September, 1986.

Documentation of environmental concerns at this Site began in 1970 when it was reported that the business in operation at that time, Evor Phillips Leasing Corp (EPLC), was stockpiling drums and sludges on the property. At that time, the property was owned by Kem Manufacturing Corporation which leased it out to EPLC. In 1971, the property was also leased to North American Metal and Chemical Company (NAMCC) who reported that approximately 1,100 drums and large piles of sludge existed on Site. Under agreement with NJDEP, NAMCC removed these materials in February, 1973. Subsequent and concurrent operators on the facility included Chemical Conversion Corporation (CCC) and SGC Industries (SGC). In 1973, these companies constructed the concrete lined lagoons and utilized them for the neutralization of waste waters. NJDEP closed



these lagoons in 1975 for non compliance with waste water treatment standards and ordered them not to be re-used. NAMCC continued to operate at the Site performing precious metal recovery operations from waste films, printed circuit boards and spent plating solutions. International Silver Company (ISC) followed by Sogem Precious Metals Corporation took over the recovery activity and continued operating at the Site until September, 1986 when they discontinued operations at the facility.

During the active years in which these companies operated, it has been reported that various chemicals were repeatedly discharged onto the grounds of the Site. The reported chemicals include: acids, caustics, chlorinated solvents, benzene, toluene, esters, ketones and ammonia. It was further alleged and documented by the New Jersey Department of Criminal Justice (CJ), that as many as 5,000 drums containing these chemical materials were buried on-site. A box trailer filled with leaking drums and a 5,000 gallon tank trailer were also reportedly buried on the Site. This information was provided to CJ by a former employee of the facility in 1981 and again in 1996.

A chronological record of the past activities which occurred at this Site has been included in Attachment B.

### C. REMEDIAL ACTIONS

The NJDEP has been actively monitoring and pursuing cleanup options at the EPLC Site since February, 1973. Consent Judgements in February and August of 1974, issued by NJDEP to the lessees of the property (EPLC & SGC) requested the waste water treatment facility be modified to comply with State hazardous waste regulations. Failure to comply with these judgements led to a third consent judgement in May, 1975, which officially closed that operation.

During an inspection in December, 1981, a drum containing the shock sensitive compound nitroguanidine, was discovered on Site. An emergency action was taken to remove and detonate this material off Site. At that time investigators from the Division of CJ met with two confidential informants and obtained information on the alleged hazardous waste dumping practices which occurred on Site. These informants stated that discharging chemicals directly to the ground was a common practice and that the neutralization ponds which had existed on Site were operated solely to disguise the dumping activities. They further alleged that drum burial activities were ongoing at the Site since 1971. During one four day period in 1974, they allege that approximately 4,000 drums were buried on Site to prevent discovery by NJDEP inspectors. These drums contained various compounds which were segregated by a chemist prior to burial. Several of the drums were supposedly marked with labels reading U.S. Government, Poisonous gas. These informants were taken to the Site where they prepared a map which roughly depicted where the burial areas were located. This map and the report by the NJ CJ have been included in Attachment A.

With this information, NJDEP conducted geophysical studies of the Site in 1982. Several anomalies were recorded which indicated the presence of buried drums. In December, 1982 the Site was proposed for inclusion on the NPL. Concurrent with the NPL process, NJDEP also requested ISC and EPLC to perform exploratory excavations to uncover the buried waste. Negotiations with ISC and EPLC for the exploratory trenches continued until they filed for

bankruptcy in July, 1983. At that time NJDEP began a PRP search and successfully identified 10 corporations which may have contributed to the contamination which exists on the Site. Three Directives were issued by NJDEP to the PRPs to fund the cleanup activities. These directives were issued in May, 1986, December, 1988 and March, 1989. These directives were limited in their success and NJDEP continued on with the NPL evaluation process. In November, 1986, a Remedial Investigation (RI) was initiated by NJDEP. As part of this RI, in January 1987, seven test pits were dug which exposed several areas containing drums. Approximately 30 to 40 drums of chemical wastes were removed by the NJDEP during these initial investigations. The test pits in which drums were discovered ranged from three to eleven feet in depth. The drums discovered in one of the test pits were punctured in the bottoms and sides. The RI was completed in April 1992 and in May, 1992 a Feasibility Study (FS) was completed. The FS outlined potential remedies for the contamination identified during the RI based on the criteria of effectiveness, implementability and cost.

In September, 1992, the Record of Decision (ROD) was signed which selected the remedial alternatives to be utilized in cleaning up the Site. The ROD was divided into two Operable Units (OU). The first OU addressed groundwater and drum remediation and the second OU addressed soil remediation, buried drum removal, underground storage tanks removal and building demolition. In April, 1993, NJDEP issued an ACO to the PRPs to implement the ROD. Negotiations with the PRPs continued until January, 1996 at which time they agreed to implement OU2 of the ROD. In February, 1996, the PRPs began OU2 by demolishing all remaining Site buildings and removing the silver reclamation furnaces. In March, 1996, the informant who contacted CJ in 1981, re-visited the Site to identify the suspected burial areas. Test pits in these areas uncovered 60 intact buried drums and nearly 100 drum carcasses previously unknown to the NJDEP. Further test pit excavations by the PRPs were conducted in January, 1997. They yielded over 150 intact drums and over 300 drum carcasses. The location of these test pits was based solely on the map prepared by the CJ from statements of the former employee. Discovery of these new drum burial areas gave credibility to the former employee's statements and the belief that DOD waste may exist on Site.

Due to the time critical threat posed by the groundwater contamination and its potential impact on the nearby well fields serving Sayreville and Perth Amboy, NJDEP initiated OU1 by constructing a groundwater extraction and treatment system in February, 1995. The treatment system included particulate filters, an air stripping column and carbon adsorption units. The treated water was to be temporarily discharged into the local sewer system while the re-injection gallery was constructed. A test of the treatment system revealed an unusually high metal concentration which prevented discharge to the local sewer. To correct this problem, NJDEP made plans to construct a metal precipitation treatment system to work in concert with the existing water treatment system. Unfortunately, the planned location of this new system fell exactly where the confidential informants claimed the buried DOD waste was located. Earlier geophysical studies conducted by NJDEP in July, 1996, confirmed the presence of buried metallic objects.

NJDEP made efforts with the PRPs to address the buried waste in this area to no avail. In a letter to the NJDEP-BSM, dated September 11, 1996, the PRPs claimed no responsibility for the area identified as the "buried cylinder(s)/drum area", and indicated they would not conduct any

remedial activities in this area. Subsequently, on September 27, 1996, NJDEP formally requested EPA to conduct a Removal Action in the potential DOD drum burial area of the Site.

### III. REMOVAL ACTIVITIES

The actions taken by EPA at this Site are described in detail below. A table listing the chronology of key removal activity dates has been included in Attachment B. Also in this attachment is a detailed chart listing the date and duration of each of the key Site activities. A removal action fact sheet, summarizing the incident, threats and actions taken was also prepared and is included in Attachment B.

#### A. REMOVAL ASSESSMENT

The EPA-RAB received the Removal Action request from the NJDEP on October 13, 1996. RAB was requested to address a small area of the Site identified by a former employee which was alleged to contain cylinders/drums with government markings, labeled as poisonous gas. The area encompassed approximately 10,000 ft<sup>2</sup> and was located near the south east corner of the 5.77 acre property. Based on information provided by the NJDEP and the quantity and type of material already discovered on the Site, EPA determined the Site to be eligible for a Removal Action. As a result, an Action Memorandum was prepared to obtain authorization for the cleanup and to secure the necessary funding. The Action Memorandum was signed by the Emergency and Remedial Response Division (ERRD) Director on January 13, 1997 and authorized a \$350,000 project ceiling. The scope of work authorized for this Removal Action was the excavation, stabilization and disposal of buried waste in drums and other containers. Specifically, the waste type suspected to be encountered was CWA in DOD type containers.

The On Scene Coordinator (OSC) selected to manage the Removal Action was assigned this project on January 9, 1998. One of the first steps taken by the OSC was to request the assistance of the EPA Environmental Response Team (ERT) to assess the area in question and develop a work plan. ERT had previously worked with DOD on a similar excavation and removal of buried waste and was familiar with the hazards and safety protocols which would be required for this Removal Action. The OSC met with ERT on January 13, 1997 to review the Site history and discuss the safety protocols to be employed. ERT was requested to perform a detailed geophysical study of the area in question and to obtain soil, soil gas and groundwater samples within this area. This information would be essential in planning the removal activities and establishing if any CWA existed in this area. ERT was also requested to develop an air monitoring plan which could be implemented during the Removal Action. ERT began their assessment activity on January 28, 1997.

The geophysical methods employed for this investigation included magnetometry, electromagnetics (EM) and ground penetrating radar (GPR). Prior to utilizing any of these techniques, ERT established a geophysical grid system over the area in question. This provided a re-producible data collection system and allowed a logistical comparison of all data.

Magnetometry involves measuring the earth's magnetic field and the variations which may occur over the subject area. These variations, called anomalies, are most often caused by the presence of

ferromagnetic material which includes: drums, cylinders, rebar, fences and other metallic debris. The magnetometry instrument utilized by ERT in their survey was a GEM Overhauser Magnetometer/Gradiometer. EM techniques induces an electromagnetic field of known frequency into the subsurface of the subject area. After it has propagated through the subject area, changes in the electric and magnetic components of the electromagnetic field are measured and recorded. This data reveals information concerning the conductivity of the soils encountered. The electromagnetic field data is recorded in two components, the in phase and quadrature phase data. The in phase data measurements of the soil can detect good conductors such as metal objects. The quadrature data measures differences in conductivity of the underlying soil. Soil around buried waste tends to have a higher porosity resulting in higher moisture content and higher electrical conductivity than soil which is undisturbed. Essentially this data measures soil density and indicates if there are areas which contain consolidated and un-consolidated soil. The EM equipment utilized was a Geonics EM-31 system with an Omnidata data logger. GPR uses high frequency radio waves to map features in the subject area. Radar frequencies are directed into the ground and the variations in signal strength recorded are correlated to the depth and type of reflector present. These reflectors may be changes in lithology, compaction, buried objects or changes in interstitial fluids. A SIR System 3 was used to collect the GPR data.

Maps of the data generated by each of these geophysical methods were created and used in concert to determine the most probable locations and depths of buried waste within the subject area. These maps are included in Attachment C. Results of the ERT geophysical study indicated that four probable anomalies existed within the subject area at depths of between seven and eight feet. The anomalies were identified simply as A, B, C and D. On February 18, 1997, ERT installed stakes on Site which marked the locations of these four anomalies. A map depicting these 4 anomalies and the geophysical grid has been included in Attachment C.

After obtaining the preliminary geophysical data, ERT selected seven sampling locations around and within the four anomalies. At these locations, hand augers were used to collect soil samples at a depth of seven feet. The soil samples were shipped off Site and analyzed for CWA and their breakdown products. The results of these samples were negative. The borings were also surveyed with several air monitoring instruments in an effort to analyze the soil gas surrounding the anomalies. The air monitoring devices utilized included a chemical agent monitor (CAM), a photo ionization detector and two single point monitor tapemeters, one specifically for phosgene and one for chlorine. Results from these monitoring devices indicated essentially no readings above background. Following the sampling, the borings were backfilled with the original material. Two monitoring wells also existed within the boundaries of the identified anomalies. Water samples taken from these wells also indicated no contamination with CWA or their breakdown products.

The results of the ERT assessment were successful in identifying four specific areas which could have contained buried metal objects. Analytical data from soil, soil gas and water samples also indicated that if CWA were present, they were still confined in their original containers and not leaking. This information was incorporated into the health and safety plan as well as the Site work plan. Before implementing the actual excavation activities, numerous contingency plans were generated and implemented to provide local residents, businesses and City, County and State officials with opportunities to contribute to the planned removal activities.

## **B. PRE-EXCAVATION PLANNING**

### **1. OFFICE OF EMERGENCY MANAGEMENT**

On January 20, 1997, the OSC contacted the Old Bridge OEM coordinator to inform him of the upcoming Removal Action at the Site. The OEM coordinator was very responsive in supporting the planned actions and played a key role in identifying the local issues which needed to be addressed. The OEM coordinator also notified the Sayreville OEM coordinator about the planned EPA activity and secured their participation in the Site contingency planning. The Old Bridge OEM coordinator arranged three meetings with emergency response personnel from Old Bridge, Sayreville and Middlesex County which included Police and Fire Department representatives and the County HAZMAT Team. The Mayors of both Old Bridge and Sayreville also attended these meetings and offered their support for the EPA action. The meetings were held on February 6, 1997, February 20, 1997 and February 27, 1997. Informal meetings were also held on Site to allow all involved parties to view the layout of all proposed work areas. At the conclusion of the last meeting, all areas of concern had been identified and addressed and each participant was assigned an area of responsibility in the overall contingency plan.

Public meetings were held to alert the residents and businesses in the surrounding community of the planned actions. The first meeting was held in Sayreville on March 4, 1997. Congressman Pallone was in attendance of this meeting and commended the planned EPA response and offered the resources of his office to achieve our objectives. The second meeting was held in Old Bridge on March 6, 1997. At both of these meetings, EPA outlined its planned activities and the safety measures it was employing to protect the environment and the surrounding population. Local officials and emergency response personnel from both Sayreville and Old Bridge were also present to endorse the proposed safety measures and to respond to any specific local issues. Both meetings were well received by those in attendance. To provide the public with another opportunity to comment on the planned EPA action, a public availability session was held on Saturday, March 15, 1997. At this meeting, residents from both Sayreville and Old Bridge were updated on the action.

On March 14, 1997, a test of the emergency response contingency plan was conducted. As per the established plan, EPA sounded the site siren and activated the automated telephone messaging system. The air treatment system was activated and all Site personnel were accounted for and evacuated from the exclusion zone. The Police Departments implemented the road closures to eliminate traffic passing near the Site and assisted residents who were in need of assistance to evacuate their homes. The Fire Departments and Hazmat Teams established a temporary command post off Site and responded to the scene in Level B personal protective equipment (PPE) prepared to make an entry into the exclusion zone. The drill was successful in familiarizing response personnel with their assignments in the event of an actual emergency and demonstrating to the public and media that the established contingency plan was effective.

The site siren was installed by ERCS and its tone was selected so as not to resemble that of the sirens of nearby businesses. This avoided any confusion as to where the emergency was occurring. The range of the siren was approximately 1 mile. As an additional test, the siren at the Madison Park firehouse, which is part of Old Bridge and located approximately 1 mile from the Site, was also sounded to increase the range of notification. The automated telephone messaging system

delivered a pre-recorded message to over 50 residents and businesses within the established safety zone. This system, called the Community Alert Network (CAN), was created for emergency situations. The names and telephone numbers of all residents and businesses within the projected impacted area were supplied to EPA by the OEM coordinators prior to the test date. Language for four different messages were also reviewed by the OEM coordinators and installed in the CAN system. These messages told the phone call recipients what to do, if anything, in response to the incident occurring on Site. Message number four, delivered as part of this test, explained to the receiver that this was a system test and that no real emergency existed. Results of the CAN test showed that all phone numbers listed were notified within five minutes of being activated. This further enhanced the level of confidence in the Site contingency plan. The CAN call report is included in Attachment D along with a cut sheet for this service and copies of the messages programmed.

Due to the potential of CWA on Site, the OEM coordinators decided to implement some additional safety measures during EPA field activities as an added level of protection. A limited State of Emergency was declared during the excavation activities by Old Bridge Township. This allowed the City to maintain a heightened level of response if it became necessary. The State of Emergency was lifted at the conclusion of excavation activities in April, 1997. Also, school bus routes were altered so that no occupied buses past within a 1000' of the Site. These route changes posed problems with the Board of Education since the Site is located off a main road and caused delays in pick up and arrival times of students. The OSC was in weekly contact with the school bus dispatcher to keep her apprised of Site progress. At the conclusion of this Removal Action, the dispatcher was notified and the normal bus routes were resumed.

Tours of the Site were also provided to local businesses and residents to provide them with first hand knowledge of field activities and allow them to be more comfortable with the operation. CONRAIL, which operates active railroad lines on the North and South borders of the Site, was also notified and visited the Site with their Regional Safety Manager. At his request, copies of the daily air monitoring data were forwarded to CONRAIL and his name was added to the CAN call list.

The OEM coordinators from Old Bridge and Sayreville as well as the Middlesex County HAZMAT Team were routine visitors to the Site. Each was updated on current activities, materials uncovered and work plan modifications. During the period in which drum discovery and extraction occurred, the Middlesex County HAZMAT Team maintained a state of readiness at the Madison Park firehouse in the event an emergency response became necessary. The cooperation and assistance EPA received from these organizations was essential in safely conducting this Removal Action and addressing the public concern over this potentially dangerous activity.

## **2. DEPARTMENT OF DEFENSE**

The DOD-TEU was a critical component in the planning and safe execution of the work plan for this project. They assisted EPA with the development of the health and safety plan (HASp) and provided daily on Site air monitoring of the exclusion zone. The on Site TEU representatives were also on standby in the event DOD waste material was discovered. The knowledge and experience the TEU personnel have regarding DOD CWA waste was extremely beneficial during Site

operations, especially when drums of unknown materials were discovered. The TEU personnel were able to advise EPA on the potential presence of CWA based on air monitoring data as well as visual inspections of the containers.

Activation of the DOD for this project was achieved through a lengthy process of requests from the National Response Team, Regional Response Team, personal contacts and formal requests by the Mayors of Old Bridge and Sayreville and from Congressman Pallone. The major problem encountered with activation was that DOD was unable to commit any resources to a cleanup in which DOD waste was not already confirmed to be present. At this point in the project the presence of DOD waste was based solely on a former employee's recollection and no CWA were discovered during the assessment phase. Although DOD was willing to provide the support needed, administratively they were unable to do so.

The activation issue was finally resolved with the assistance of the COE. Through an existing emergency response Inter-agency agreement (IAG), EPA was able to immediately activate the COE. The COE, in turn, was able to activate the DOD through a previously existing emergency agreement. Hence, EPA contracted with DOD through the COE. During Site activities, a COE representative was on Site to act as a liaison between EPA and DOD. The existing IAG between EPA and COE was for \$25,000. A new IAG between the EPA and the COE was prepared to address the projected costs in excess of this amount. It was unclear what the final cost would be since the length of the excavation activities was uncertain. At the conclusion of the project, the actual COE costs reached approximately \$44,000. Rather than implementing the newly prepared IAG between the COE and EPA, EPA simply modified the original IAG. The IAG was officially modified on September 26, 1997 to have a new ceiling of \$44,000. The IAG number for this project was DW96941709-3.

With the contracting issue resolved the DOD was activated to support the planned Removal Action. A meeting with the COE, EPA and DOD was held on Site on March 13, 1997. During that meeting, the work plan and HASP were reviewed and contingency plans were developed to store any DOD waste discovered in a secure area of the Site. The TEU mobilized to the Site on March 19, 1997. TEU provided real time air monitoring of the excavation area through a remote monitoring station located adjacent to the containment structure. TEU monitored for CWA through the use of a mini Chemical Agent Monitor (CAM). The mini-CAM was calibrated for specific components of numerous CWA and an air sample was drawn into the unit every two minutes. The sample was then analyzed using a Gas Chromatograph and the results were reported. The entire TEU monitoring operation was contained in a van and operated every working hour that there was activity inside the containment structure. Due to the physical barrier between the excavation and the monitoring station, TEU maintained constant radio communication with workers within excavation area.

### **3. EPA AND ERCS**

The ERCS contractor was responsible for the physical excavation and search for the buried waste material and containment of any spills or leaks of hazardous materials which could have occurred. In preparation for encountering hazardous materials, particularly CWA, the elements of the HASP were constantly reviewed and strictly enforced. Safety measures to protect Site personnel were

implemented by EPA, ERT and ERCS working together with support from local resources. The measures taken are described below.

Baseline blood samples were taken of all personnel and their cholinesterase levels were measured. Cholinesterase is an enzyme found in the body's plasma and blood cells. Its function is to keep the synapses of the nervous system clear, allowing un-impeded neural transfers throughout the body. Any exposure to CWA will decrease an individuals cholinesterase level. Having baseline data on Site personnel will assist in determining actual exposure levels and treatment options. Other medical plans included visiting local hospitals and notifying them of the potential dangers that existed on the Site. The hospital included in the HASP, Robert Wood Johnson, was chosen specifically for its ability to handle chemical exposures and HAZMAT related medical emergencies.

The containment structure installed over the anomalies was the primary safety measure instituted during the Removal Action. The skeleton of the structure was constructed of 6 inch extruded aluminum I beams and spanned 120 feet in length, 90 feet in width and reached a center height of 36 feet. The structure was enclosed with a re-enforced PVC fabric coated with polyester which achieved the desired chemical resistance. The fabric formed a nearly air tight enclosure and the bottom portions were buried in the ground to increase the effectiveness of the barrier. The enclosure was equipped with two windows to allow outside viewing and natural sunlight. Two air locks were also installed to allow personnel egress points and one large sliding door was installed to allow equipment egress. Maintenance and upkeep of this containment structure was minimal and it was very effective in providing a physical barrier between the anomalies and the surrounding environment. Cut sheets and literature on the containment structure are included in Attachment E.

Cylinder overpacks were also mobilized from the EPA facility for use on Site. These overpacks were specifically designed to safely contain gas cylinders and have been used on numerous other EPA projects. They are able to withstand an explosive force equivalent to 1 stick of dynamite without losing any internal pressure. They also contain gauges which allow external monitoring of internal pressure. The overpacks were refurbished with chemically resistant gaskets and new locking bolts. Since the size of the CWA cylinders being sought were unknown, the overpacks kept on Site ranged in size from 4 to 8 feet in length. A total of six overpacks were kept on Site in the event any cylinders were encountered.

The excavation of each anomaly was performed in 6 to 8 inch lifts with air monitoring performed after each pass. This procedure was outlined in the work plan and was implemented to reduce the risk of rupturing any buried containers. The work plan also included constant use of the air treatment system within the containment structure. This unit contained a 160 cubic feet per minute blower with an attached suction hose 30 feet in length and 6 inches in diameter. The blower pulled air from the excavation area through the hose into the treatment units and then discharged it. The treatment units were two pairs of 55 gallon drums filled with various media designed to adsorb specific types of chemicals. The primary units were filled with the material known as AXB, which is designed to treat oxidizers, organics and CWA. The backup unit was filled with the media known as Mark V and activated carbon. These materials adsorb oxidizers and organics. Cut sheets on these materials, their material safety data sheets and a schematic of the air treatment unit has



been included in Attachment F. The entire treatment unit was skid mounted and was placed near each of the excavation areas during Site operations.

EPA enlisted the support of ERT to perform additional air monitoring within the containment structure and around the perimeter of the Site. ERT used their Response Engineering and Analytical Contract (REAC) to provide the required monitoring. During all excavation activities, 2 REAC personnel were within the containment structure providing the necessary air monitoring of the excavation. A third REAC person provided routine air monitoring around the perimeter of the Site at 11 pre-selected locations to ensure no off Site releases had occurred. REAC also produced daily air dispersion models with current weather conditions to indicate a projected area of impact, should a release occur. The daily weather conditions were recorded through an on Site weather station, the Coastal Climate Weatherpak, and the information was transferred to the Areal Locations of Hazardous Atmospheres dispersion model. These models generally indicated that a safety zone of 300 to 500 feet be maintained around the excavation area. As an added precaution, the established safety zone in the HASP was 1000 feet. Excerpts from the REAC final report detailing how the weather station functions and how the air dispersion model is generated have been included in Attachment G. Copies of several different air dispersion models generated for this Site are also included.

REAC utilized several pieces of equipment in the air monitoring plan. The name of each piece of equipment and the contaminant(s) it measured are as follows. The Biosystems Cannonball 2 was used to measure for explosive conditions, oxygen levels, sulphur dioxide levels and hydrogen cyanide levels. The Foxboro OVA-128 was used to measure the total concentration of all organic chemicals present. The Photovac Micro TIP IS-3000 was used to measure the total concentration of all photoionizable chemicals present. The CAM was used to monitor for nerve or mustard agents in the air. The detection limits on this piece of equipment are not as sensitive as the mini-CAM unit operated by TEU, but it provided a real time reading and was capable of detecting significant releases. The Zellweger Analytical - TDL Tapemeter was utilized to measure concentrations of phosgene and chlorine. Additional descriptions of these pieces of equipment and a cut sheet on the CAM have been extracted from the final report prepared by REAC and are included as Attachment H.

To further support the planned activities, EPA enlisted the assistance of a Health and Safety Technical Manager from START. This individual had several years of experience in assessing and disposing of DOD waste. The START Technical Manager attended both public meetings and assisted the OSC by answering several health and safety questions which arose during the meetings. He also made several Site visits during the course of the Removal Action and was instrumental in refining the Health and Safety Plan. During his Site visits, he offered numerous suggestions which were implemented to increase the efficiency and safety of the excavation activities.

With all of the pre-planning complete and the contingency plans in place, excavation activities were set to commence. The organization of this Removal Action and the established chain of command was also established in preparation for the excavation activities. An organization chart for this Removal Action is included in Attachment I along with a list of important Site personnel telephone numbers.

## C. EXCAVATION ACTIVITIES

The area within the containment structure was divided into four equal sections of approximately 30 feet by 90 feet. The partitioning of the containment structure was done for logistical purposes to allow quick identification of the areas being excavated. The four anomalies identified during the assessment were spread out among these sections. Anomaly A was located in Sections 2 and 3. Anomaly B was located in Sections 3 and 4. Anomaly C was located in Sections 1 and 2. Anomaly D was located in Sections 2, 3 and 4. EPA decided to excavate the entire area within the containment structure, even if an anomaly had not been identified, to allow for potential discrepancies in the geophysical studies.

Two monitoring wells, MS-3S and MS-3D, which were previously installed by the NJDEP as part of their groundwater monitoring program were located in Section 4 of the containment structure. After consulting with NJDEP, EPA abandoned these wells in accordance with State protocols. This action was taken so that the planned excavation activities could proceed unimpeded.

Site security was implemented on February 19, 1997 and continued until April 20, 1997. The dates for security correspond to the dates which excavation activities began and were completed, respectively. Security guards were present during all hours which EPA and ERCS were not on Site. Routine patrols were performed by security and no incidents of vandalism or unauthorized entries were reported for the entire duration of the project.

### 1. SECTION I

Activity in Section I of the containment structure began on March 19, 1997 and was completed on March 25, 1997. The initial work involved breaking apart and removing concrete pads which covered approximately 30% of this Section. This was accomplished with air powered jack hammers. Following concrete removal, the excavation of anomaly C and the remainder of Section 1 began.

A layer of discolored soil was noted at a depth of two feet. This soil, approximately 10 tons in weight, was excavated, staged separately and was not used as backfill material. The excavated material also contained numerous fiberglass pipe sections ranging from 6 inches to 3 feet in length. The Section was dug to a depth of approximately 10 feet at the center of the recorded anomaly. Additional sections of fiberglass pipe, metallic spools and one four ounce sample jar filled with charcoal were uncovered. Each of these items was scanned with air monitoring devices by REAC and TEU and none gave readings above background. Following this, they were removed from the containment area and staged in a holding area. Several concrete footers and drain pipes were also uncovered in this Section. A drum connected to these drain pipes was also uncovered and is believed to be part of the septic system. The drum was determined to be the source of the anomaly. Air monitoring of the drum showed no readings above background. Section 1 was visually inspected and photodocumented prior to being backfilled with the usable excavated soil.

Air monitoring difficulties were encountered at the start of excavation activities due to the accumulation of excavator exhaust fumes within the containment structure. The sulphur content in the exhaust fumes caused erroneous readings on the air monitoring equipment. To correct this

problem, a flexible manifold was attached to the excavator which discharged the exhaust outside the containment structure. Periodic venting of the containment structure through the use of a venturi blower and operation of the air treatment equipment also helped reduce the presence of exhaust fumes and the associated air monitoring errors.

## 2. SECTION II

Excavation of Section 2 began on March 26, 1997 and was completed on April 9, 1997. On March 27, 1997 ERCS encountered a pocket of buried drums at a depth of approximately 7 feet. The location of these drums correlated exactly with the geophysical data generated by ERT identified as anomaly A. The drums were carefully hand excavated and then lifted out of the excavation and staged inside the containment area. In pursuit of these drums, the excavation was extended into a portion of Section 3. Air monitoring data showed no readings for any CWA. Organic vapors however, were detected in several of the excavated drums and gave readings as high as 600 units on the Microtip. The background reading in the excavation pit reached as high as 25 units on the Microtip. The air treatment units inside the containment area were periodically activated using the Mark V and activated carbon series. The units were kept running until background readings were below 1 unit on the Microtip, usually 15 minute intervals once or twice a day. At the end of each day the excavation was covered with fresh fill to reduce possible overnight emissions. The air treatment units were also activated for a short interval to ensure no elevated readings overnight.

A total of 32 drums were extracted and overpacked from this Section. Two of these drums were full of small laboratory size containers. In addition, 2- 5 gallon pails filled with lab size containers were also uncovered. A total of 274 laboratory sized containers were removed from this Section. Approximately 7 drum carcasses were also pulled from this Section. Other material extracted from the excavation included several bags of a silicon like gel and a small drum of lubricant. These materials were believed to be used in the manufacturing of fiberglass pipe. No cylinders were uncovered. Approximately 20 tons of contaminated soil which surrounded the buried drums was also excavated and staged on Site.

The excavation in Section 2 was pursued to a depth of approximately 14 feet. At this depth, additional geophysical surveys were conducted and indicated no further anomalies below this level. Satisfied that no other buried materials existed in this Section, the area was photodocumented and backfilled with usable excavated material. The contaminated soil removed from this Section was combined with the un-usable soil from Section I and placed in two, 20 cubic yard roll off boxes staged on Site.

## 3. SECTION III

The excavation in Section 3 began on April 10, 1997 and was completed on April 14, 1997. The excavation yielded approximately 25 lab size containers but no drums or cylinders. A subsurface structure of re-enforced concrete was uncovered in the southern end of Section 3. This structure resembled a loading bay ramp or storage area which may have been used in conjunction with the adjacent railroad tracks. The concrete ramp began about 2 feet below grade and extended in a south-easterly direction to approximately 10 feet below grade. The ramp was approximately 20 feet in length. This structure was probably the area identified as Anomaly D in the geophysical

studies. The area identified as Anomaly A was already excavated as part of the Section II work. An 18 inch corrugated metal pipe in the center of Section 3 was also discovered approximately 2 feet below grade. This pipe was traced and led into Section 4, described below. Section 3 was photodocumented and backfilled with the usable excavated material..

#### 4. SECTION IV

The excavation in Section 4 began on April 14, 1997 and was completed on April 18, 1997. The excavation did not yield any drums, cylinders or laboratory size containers. Four, inter-connected concrete structures were uncovered in this Section. These structures were located approximately 3' below grade. They measured approximately 15' x 15' and were approximately 15' deep. The walls were constructed of 2' thick re-enforced concrete and the bottom of the structures were also concrete. There was an archway which connected two of the structures and an 18" metal pipe which extended from grade level in Section 3 to a depth of approximately 13' in Section 4. Two of the concrete structures were full of debris while the other two were not. A drawing of the concrete structures discovered in this Section and Section 3 have been included in Attachment C. The debris consisted of fiberglass pipe, fiberglass tape, sludge, visibly stained soil, railroad ties and other lumber products. This debris was also buried outside the concrete vaults discovered in this Section. Approximately 256 tons of this material was excavated and staged within the containment structure. The pile was knocked down into smaller sections and scanned with air monitoring and metal detecting instruments. Air monitoring data showed no readings for any CWA throughout the excavation of this section and the sifting of the debris pile. Organic vapors, although detected were in much lower concentrations than previous operations and were cleared by operating the air treatment units. As the debris was cleared it was transferred outside the containment area into roll off boxes for disposal. A total of 18 roll off boxes were utilized to contain the debris uncovered in this section. A total of 372 tons of certified clean fill was brought on Site and used to backfill the excavated areas in Section IV.

#### D. POST EXCAVATION ACTIVITIES

##### 3. WASTE STORAGE

The 300 lab packs were inspected by a field chemist and grouped by general physical properties and appearance. Composite samples were then taken from each group and several basic compatibility tests (pH, flash point, oxidizer, etc.) were performed. These tests indicated that all lab pack groups present were generally compatible and could be bulked together. A lined pad was constructed within the containment structure and the lab packs were remotely crushed by group with the bucket of the excavator. Air monitoring was performed constantly and the air treatment units were activated in case of any unexpected release. The bulking operation was completed without incident and the remains of the 300 lab packs were bulked into two drums. These drums, along with the 32 other drums pulled from the excavation, were transported to secure area of the Site and staged on pallets. The area was demarcated with orange safety fence and posted with warning signs.

The 20 roll off boxes containing all 286 tons of material removed from the excavation, were covered with tarps and secured. Again, orange safety fence and warning signs were utilized to

demarcate their locations. The roll offs were positioned to provide easy access for disposal.

## 2. CONFIRMATORY SAMPLING

On March 19, 1997, the RAB received a request from the EPA New Jersey Remedial Branch (NJRB) to conduct sampling of soil and drums which were uncovered on Site by EPA and the PRPs. NJRB planned on using this information to link the PRP liability for Operable Unit 1, source removal, and future Operable Unit 2, soil remediation, together. Having similar contaminants in soil and drums discovered in the same area on Site would establish a direct cause and effect relationship and strengthen the case being built against the PRPs. The PRP excavated material had been staged on Site since the start of this removal action and was being stored in drums and roll off boxes awaiting disposal. As mentioned earlier, PRP activity was suspended while the EPA removal action was in progress.

EPA coordinated a sampling event with the START PM which took place on April 22 and 23, 1997. Level 2 Quality Assurance/Quality Control (QA/QC) data objectives were requested for the sampling event to ensure the information obtained could be used in any future cost recovery actions. The samples were taken from drums of solids and liquids as well as soil staged in roll off boxes all of which had been uncovered by the PRPs. Additional samples were taken from drums of liquids and solids and soil uncovered by EPA. Also, 13 post excavation samples were taken during this event to determine what was being left in the ground.

A total of 34 samples were taken from the PRP excavated materials. Twenty five of the samples were taken from drums and 9 were soil samples taken from 2 roll off boxes. Of the 25 drum samples, 3 contained liquids and the remaining 22 were solid. A total of 25 samples were taken from the EPA excavated materials. Ten of the samples were taken from drums, 13 were taken from the excavation areas, 1 was taken from unusable soil excavated from Section 2 and the final sample was taken of the clean fill being used to backfill Section 4. The samples were analyzed for Target Analyte List compounds, Target Compound List materials, Cyanide, Chromium VI, Resource Conservation and Recovery Act characteristics, Base Neutral Extractables, Pesticides and PCBs.

The final QA/QC package was received by EPA in July, 1997. The information was forwarded to the Remedial program, as requested, to review any correlations which may exist between the material found in drums and those found in the contaminated soil. A chart comparing the data from the PRP drums and roll offs and the EPA drums and post excavation sampling has been included in Attachment J. The chart indicates that numerous chemicals found in the EPA and PRP excavated drums are also present in the soil samples. The post excavation samples taken showed no substantial contamination above background. The sample taken of the fill material imported to the Site certified that it was free of contamination.

## 3. DEMOBILIZATION

At the conclusion of the sampling event, all excavation activities were deemed complete and preparations began to conclude the removal action. EPA was satisfied that although drums, lab packs and contaminated soil had been discovered in the excavation area, no cylinders of CWA

existed in this area. To permanently record the boundaries of the excavation, a survey crew was mobilized to document the exact location of the containment structure. The survey map generated from this activity depicts other permanent Site markers (Electrical Building, Water Treatment Building) to allow the location of the containment structure to be readily identified. An exploded view of the containment area on the survey map has also been produced and both are included in Attachment C. The containment structure was then decontaminated in place using a high pressure washer with a soap solution. Once complete, the containment structure was dismantled and shipped off site.

Approximately 74 tons of clean fill was brought to the Site and spread over the excavation area. The area was then graded to fill in voids left by the excavation. The cylinder overpacks which were on standby were returned to EPA. The OEM coordinators were notified and the limited State of Emergency was lifted. The 20 roll off boxes containing the excavated material were covered and secured in place while disposal alternatives were pursued. The entire crew was demobilized on May 2, 1997. The remaining office equipment, utilities and trailers were demobilized from the Site during the week of August 8, 1997, following disposal of the roll off boxes.

#### 4. WASTE DISPOSAL

In mid April, 1997, the OSC contacted DEP and the PRPs to determine if the PRPs were willing to coordinate disposal of the drums and roll off containers generated by EPA during this Removal Action. Since this material contained no CWA, and an existing Order with the PRPs was in place, EPA believed disposal of this material fell within the PRP scope of work. No decision was made by the PRPs at that time.

EPA continued to pursue the PRPs to assume responsibility for disposal. On July 11, 1997, EPA formally notified DEP of the completion of this Removal Action and formally requested their assistance in securing PRP support for disposal of waste material remaining on Site. EPA provided the transportation and disposal information prepared for the waste, along with suitable disposal facilities and pricing information to assist the PRPs in expediting the disposal process. At the end of July, 1997, the total rental price for the 20 roll off containers, was fast approaching the estimated disposal cost of the material they contained, approximately \$18,000. With the assistance of ORC, EPA finally obtained a formal response from the PRPs which was dated August 7, 1997. In that letter, the PRPs agreed to assume the responsibility for the disposal of the 34 drums on Site, however, disposal of the 20 roll off containers was excluded. The PRPs believed this material to be outside the Scope of Work of their Order.

Rather than continue to incur monthly rental charges for the roll off containers while negotiations with PRPs were pursued further, EPA decided to implement its disposal plans. The roll off containers were shipped to a secure landfill in PA during the week of August 4, 1997. The PRPs subsequently removed the EPA uncovered drums on November 5, 1997. On this date, they also removed the roll off containers and the pile of drum carcasses which they had uncovered during their action. The drums and roll offs were shipped to EQ Environmental in Michigan for treatment.

#### IV. MEDIA COVERAGE

Due to the nature of the threat associated with this Site and the unique method selected for mitigation, media attention to this removal action was above average. To accommodate the requests by the media for information the OSC worked closely with the EPA Communications Division, Public Affairs Team (PAT) to distribute updated Site information. Several newspapers, the Suburban and the Home News, made Site visits to interview the OSC directly while others, Star Ledger and New York Times, conducted phone interviews through the PAT. The local college radio station, WCTC 1450 AM, also ran a series of stories which tracked the progress of Site activities. Copies of several newspaper articles have been included in Attachment K.

In addition to the newspaper and radio coverage, the Site was also the subject of several television reports. One report was made on March 12, 1997 and was in the format of a round table discussion. The participants were Mayor Zagata of Sayreville and the OSC and was hosted by Assemblyman Weisnewski of the 19th District. The show focused on the history of the Site, the clean up efforts planned by EPA and the costs being incurred by local authorities in support of the clean up. Another report was filmed on April 3, 1997, by the Environmental News Magazine Response. The report appeared in their Winter 1998 video magazine and focused on actual clean up activity and the unique aspects of the mitigation method and the safety measures being utilized. Several other local television stations also visited the Site and made broadcasts which described the ongoing Site activities.

#### V. COST ANALYSIS

The final cost of this Removal Action was \$639,083, of which \$451,084 was for the ERCS contractor. A summary of the procurement requests utilized to reach this total have been included in Attachment L. Also included in this attachment are the history of the removal action ceilings and the final cost summary log. The final procurement request was signed 8 months after the removal action was officially completed. This procurement request was to de-obligate unused funds so they could be utilized on other active projects.

The final ERCS cost for this project was nearly 67% of the actual final project cost. The ERCS costs are divided into three distinct categories, personnel, ERCS equipment and other costs. The respective percentages for each of these categories were as follows: personnel costs were approximately 28%, ERCS equipment costs were approximately 1% and other costs were approximately 71%. In these three categories, certain charges are considered to be overhead costs. Overhead costs are charges for items which are based on a fixed rate, independent of the number of hours of utilization per day. Examples of fixed costs include monthly equipment rentals, ERCS owned equipment and Per Diem and Lodging expenses. On this project, overhead costs are estimated to be \$178,964, 42% of the total ERCS costs and 28% of the total project cost. Again, this amount represents charges for items that are the same whether they are used 1 hour or 24 hours per day. To reduce the impact of these charges, the ERCS crew worked 10 and 11 hours per day. The additional costs in salary for overtime of ERCS was only \$25,966. This amount is only 6% of the total ERCS cost and only 4% of the total Site costs.

In working longer days, daily productivity is maximized and project duration is minimized. This corresponds directly to a reduction of overhead costs and a corresponding reduction in overall Site costs. The cost for overtime compensation for the ERCS crew is minimal compared to the savings achieved in the reduction of overhead costs.

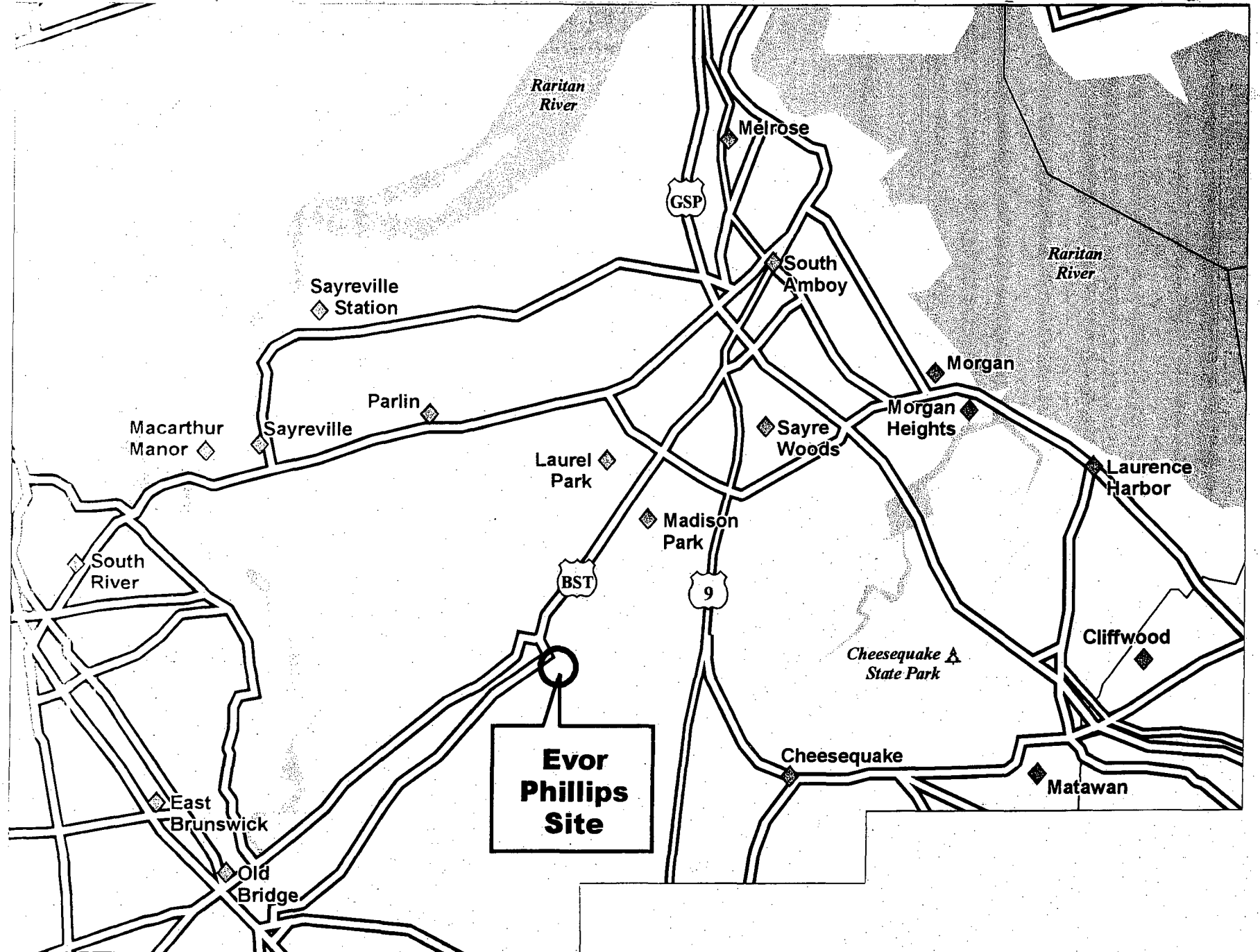
Graphical representations of all Site costs have been included as Attachment L along with several Removal Cost Management System (RCMS) reports which provide detailed information on ERCS costs. The RCMS reports are generated from the actual daily costs authorized by the OSC and recorded by the ERCS field clerk.

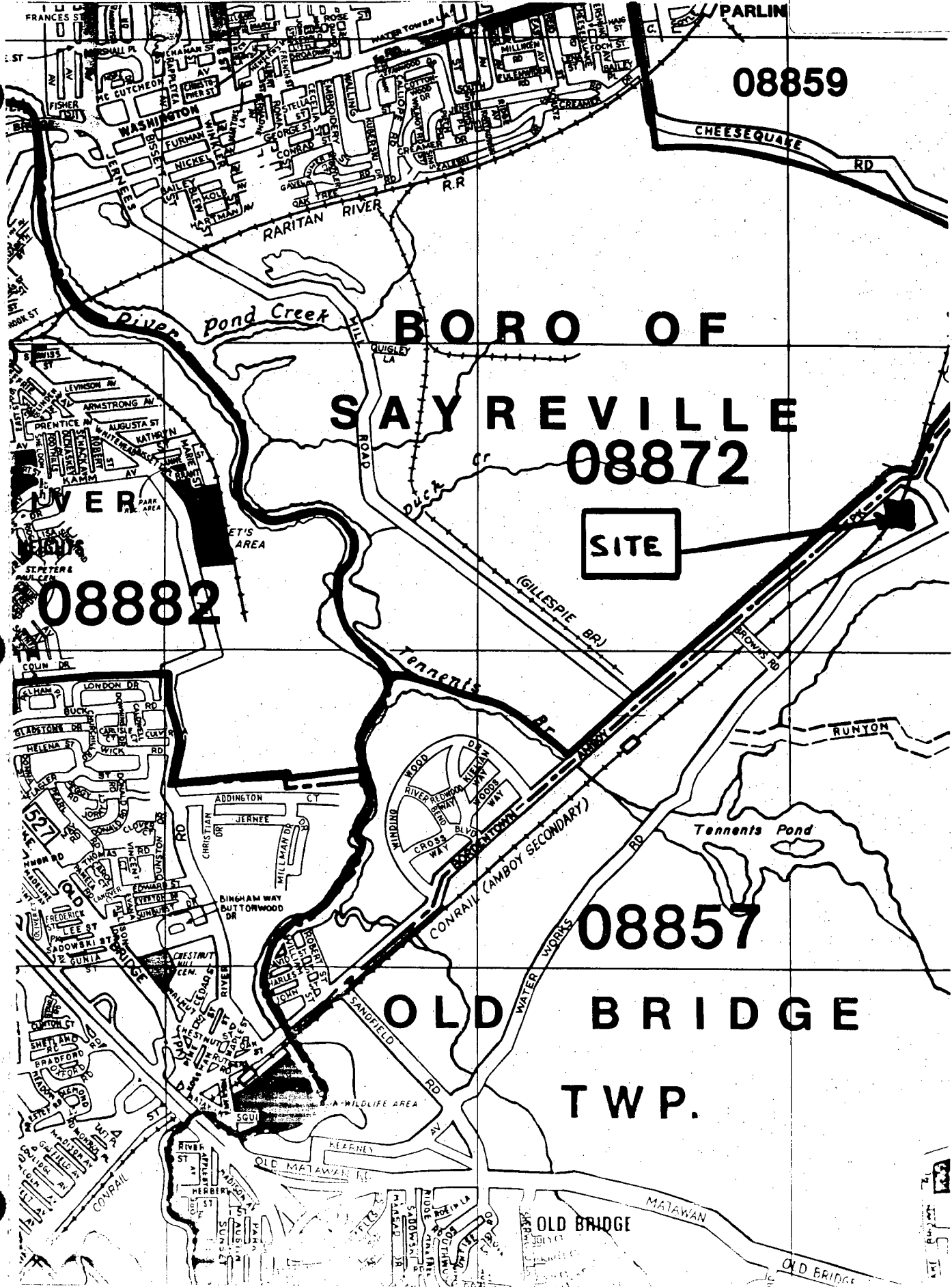
## **VI SITE IMAGERY**

Photographic and video imagery of site activities was a key element in documenting field operations. The pictures attached in this report provide visual representations of the major events which occurred during this Removal Action. The photographs and their respective descriptions have been included in Attachment M. In addition to the photographs taken at the Site, ERT videotaped field activities and created a short highlight film. This film was incorporated into the Winter 1998 edition of the Environmental News Magazine Response, Site Shorts segment. The video shows the excavation and removal of buried drums from Section II, the containment structure, the air monitoring by TEU and REAC as well as interviews with the OSC and on Site personnel. Copies of this videotape are available from ERT upon request.









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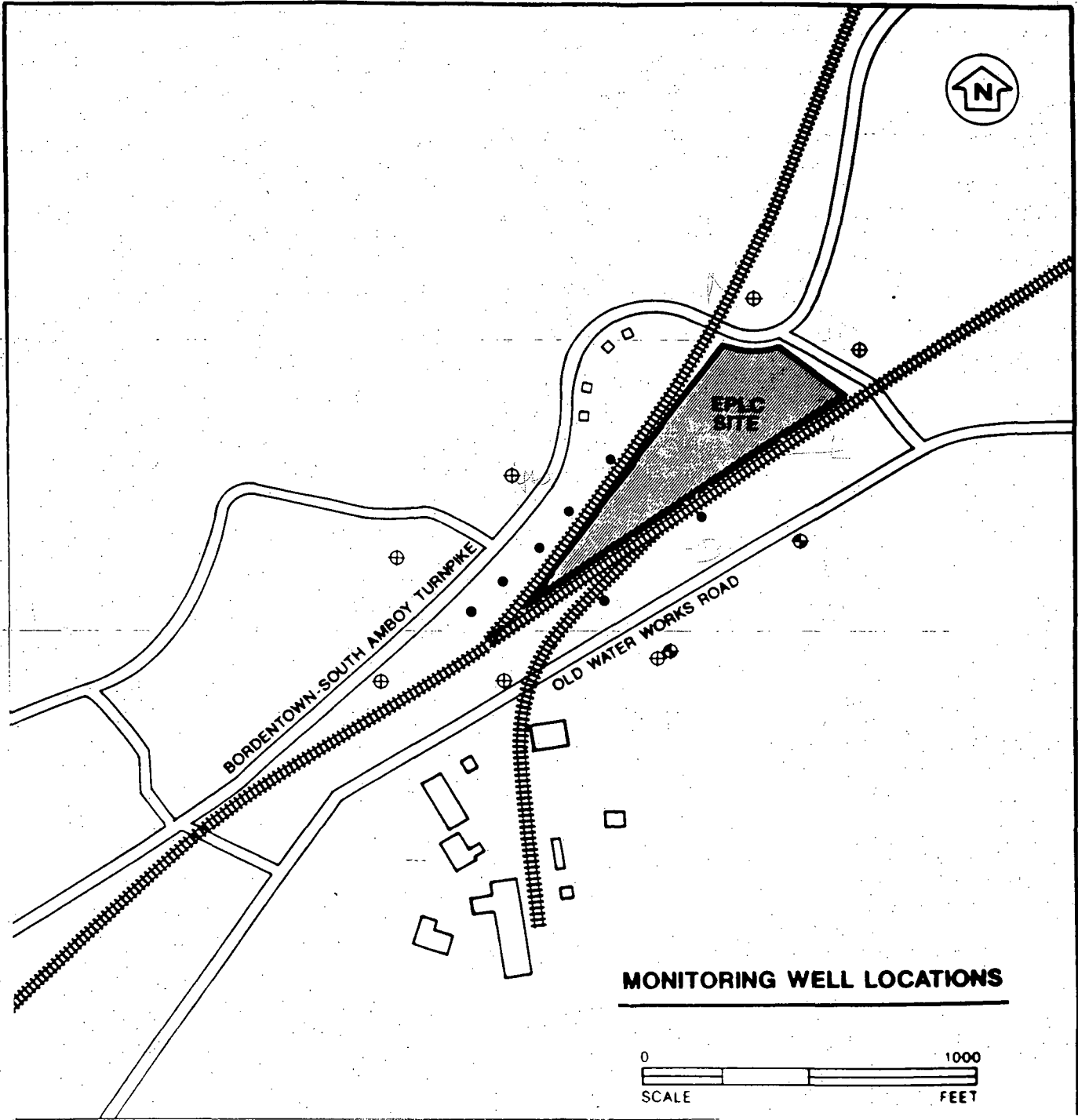
**BORO OF  
SAYREVILLE  
08872**

**SITE**

08882

08857

**OLD BRIDGE  
TWP.**



**EVOR PHILLIPS SITE**  
**DIRECTIONS FROM EDISON**

Garden State Parkway South to Exit 123, 9 South.

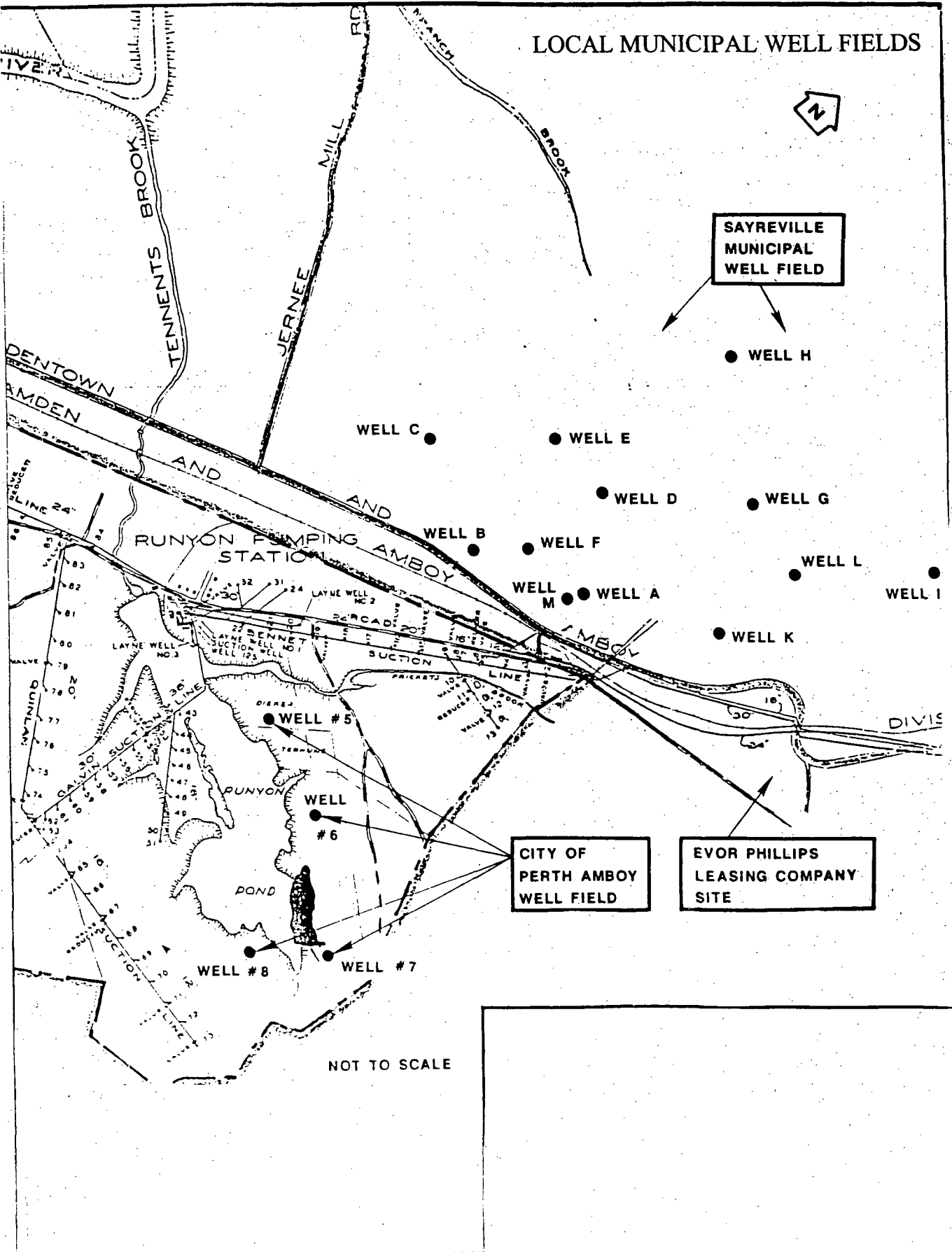
Stay on 9 South for approximately 0.3 Miles and take exit marked South Amboy/Parlin.

Make a left off exit ramp onto 615 South.

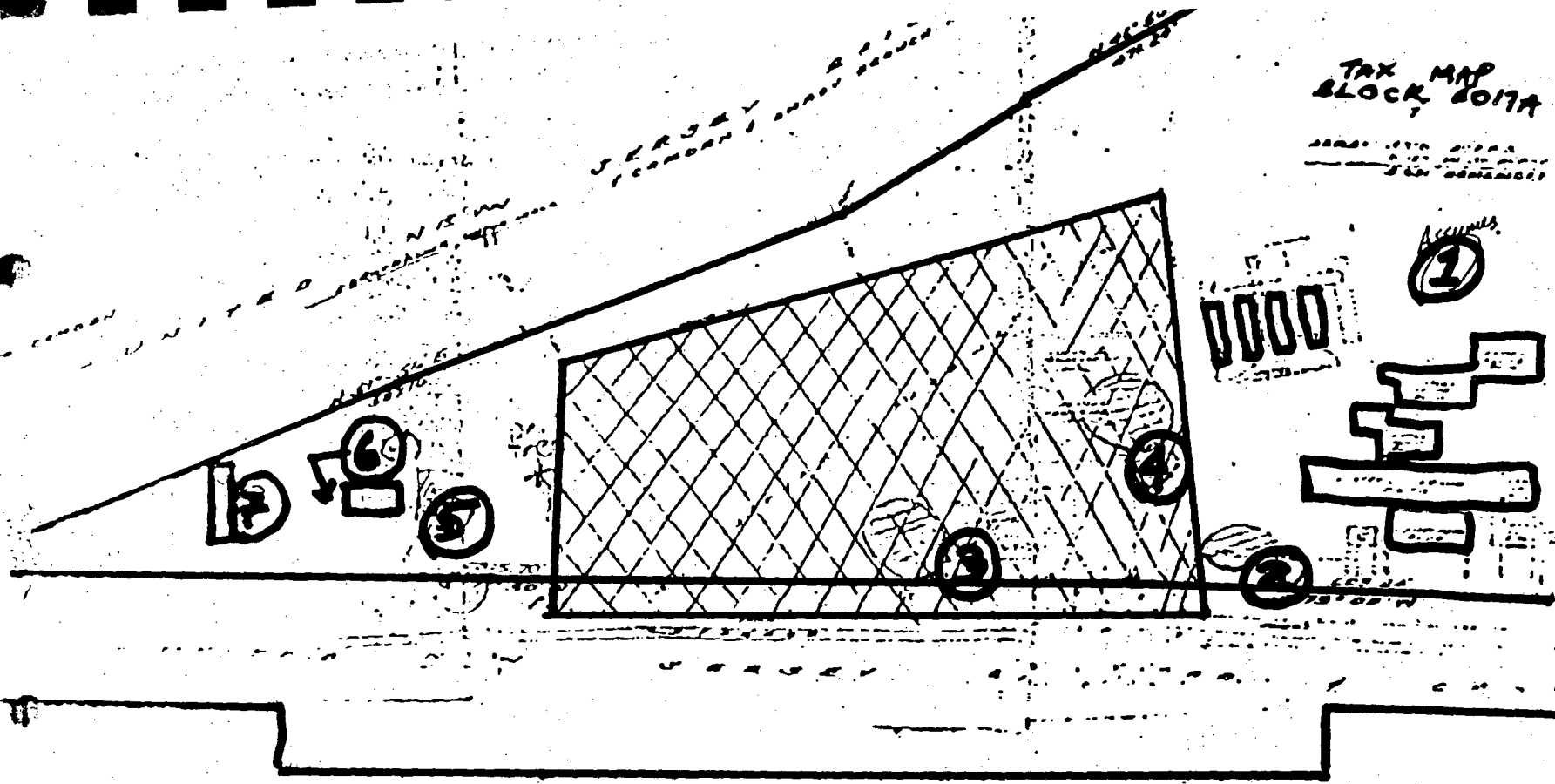
Stay on 615 South for approximately 2.5 miles until you reach Old Water Works Road. (If you pass under Railroad trucks you have gone too far)

Once on Old Water Works Road the Site is immediately on your right hand side.

# LOCAL MUNICIPAL WELL FIELDS



TAX MAP  
BLOCK 2017A



- ① AREA where 75-100 drums are buried
- \* → ② AREA where Drums are buried possibly Gas cylinders (US Army-VIRGINIA)
- ③ Area where Drums are buried
- ④ Area where Drums are buried (Ligon Area)
- ⑤ Area where Box Trailer is buried
- ✓ ⑥ Large Above ground Tank
- ⑦ Approximate area of Buried Tanker

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# CHRONOLOGY OF PAST ACTIVITIES

DATE	ACTIVITY
1969 - 1971	EPLC Hauling operations ongoing, stockpile of drums and sludges reported.
1971	Property leased to NAMCC
1972	NJDEP issues permit to NAMCC to treat industrial waste on Site
1973 February	NJDEP and NAMCC enter into ACO to remove 1,100 drums staged on Site.  CCC and SGC sublease property and begin operations
1973 September	NJDEP directs NAMCC and SGC to acquire permits for operating two lined lagoons
1974 February	NJDEP issues consent judgement to EPLC regarding lagoons
1974 August	NJDEP issues consent judgement to SGC Industries
1975	Consent Judgement issued by NJDEP to close two lagoons on Site
1981	Past employee makes report of buried waste on Site to CJ
1982 December	Site listed on NPL
1983 July	EPLC and SGC file for bankruptcy
1986 May	NJDEP Issues First Directive to PRPs to fund clean up  Sogem Precious Metals terminates operations at the Site
November	Phase I RI is initiated by NJDEP
1987 January	NJDEP digs initial test pits and encounters drums
June 29	Administrative Order on Consent issued by NJDEP to PRPs
October	NJDEP completes Phase I RI

1988	December	NJDEP Issues Second Directive to PRPs to fund clean up
1989	March	NJDEP Issues Third Directive to PRPs to fund clean up
	April	Phase II RI initiated by NJDEP
1992	April	RI completed by NJDEP
	May	FS completed by NJDEP
	September	Record of Decision signed OU1: Groundwater and drum remediation OU2: Soil remediation, Buried drum removal, Underground Storage tank removal and Building Demolition
1993	April	NJDEP issues ACO to PRPs to implement ROD
	December	NJDEP terminates negotiations with PRPs
1994	January	NJDEP refers Site to their Public Funded Site Remediation Section
1995	February	NJDEP constructs groundwater treatment system
	June	Spill Act Directive issued to PRPs to implement OU2 of ROD
1996	January	PRPs sign ACO to implement OU2 of ROD
	February	PRPs initiate building demolition on Site
	March	Past employee contacts NJDEP regarding location of buried drums
	March	NJDEP and CJ meet on Site to review past employee information
	July	NJDEP conducts a geophysical study of Site including partial excavations
	September	PRPs declare no involvement in area alleged to contain DOD waste
	September	NJDEP formally requests EPA to conduct a removal assessment on Site

# CHRONOLOGY OF EPA REMOVAL ACTION ACTIVITIES

DATE	ACTIVITY
September 27, 1996	NJDEP formally requests EPA conduct a removal action at the Site
January 9, 1997	OSC assigned to Removal Action
January 13, 1997	Action Memorandum #1 approved
January 14, 1997	Procurement Request #1 approved
January 16, 1997	Delivery Order approved for ETI
January 22, 1997	Official start date for Removal Action, Start up meeting with ETI
January 28, 1997	ERT begins geophysical study
March 3, 1997	ETI fully mobilizes crew to begin Site work
March 4, 1997	Public meeting for Sayreville residents
	IAG between EPA and the COE finalized
March 6, 1997	Public meeting for Old Bridge residents
March 19, 1997	Excavation activities begin in Section 1
	TEU initiates air monitoring
	Site security begins
March 25, 1997	Excavation activities completed in Section 1
March 26, 1997	Excavation activities begin in Section 2
April 9, 1997	Excavation activities completed in Section 2
April 10, 1997	Excavation activities begin in Section 3
April 11, 1997	Action Memorandum #2 approved

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April 14, 1997	Excavation activities completed in Section 3
	Excavation activities begin in Section 4
April 18, 1997	Excavation activities completed in Section 4
	Procurement Request #2 approved
	Procurement Request #3 approved
April 22, 1997	Enforcement Sampling of excavated materials
	Procurement Request #4 approved
May 2, 1997	ETI demobilizes crew and equipment
July 11, 1997	EPA formally notifies NJDEP of completed excavation and requests PRP support for disposal
August 7, 1997	PRPs formally refuse to pay for soil disposal
August 8, 1997	Disposal of excavated soil completed by EPA
	ETI completely demobilizes Site
August 15, 1997	EPA official completion date for Removal Action
November 5, 1997	PRPs dispose of drums excavated by EPA
April 6, 1998	Procurement Request #5 approved (deobligation)

# EVOR PHILLIPS SITE ACTIVITIES

## JANUARY 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Site Assignment																																	
ERCS Mobilize																																	
ERT Geophysical																																	

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# EVOR PHILLIPS SITE ACTIVITIES

## FEBRUARY 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
ERT Soil Sampling				█	█																							
ERT Groundwater Sampling						█																						
Anomaly Stake Out																		█										

# EVOR PHILLIPS SITE ACTIVITIES

## MARCH 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Mobilize Containment Structure			█																													
Construct Containment				█	█	█	█			█	█	█	█	█																		
Public Meeting - Sayreville				█																												
Public Meeting - Old Bridge						█																										
Site Meeting with DOD - TEU													█																			
Abandonment of MS-3S, MS-3D														█	█																	
Safety Test														█	█																	
Personnel Blood Test																	█	█														
REAC Air Monitoring																		█	█	█	█	█			█	█	█	█	█			█
Meeting with Hospital																		█														
Activity in Section I																			█	█	█			█	█							
TEU Air Monitoring																			█	█	█			█	█	█	█	█	█			█
Site Security																			█	█	█	█	█	█	█	█	█	█	█	█	█	█
Backfill Section I																									█							
Activity in Section II																										█	█	█				█

# EVOR PHILLIPS SITE ACTIVITIES

## APRIL 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
REAC Air Monitoring		■	■	■			■	■	■	■	■			■	■	■	■	■			■	■	■								
TEU Air Monitoring		■	■	■			■	■	■	■	■			■	■	■	■	■			■	■	■								
Site Security	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■										
Activity in Section II		■	■	■			■	■	■																						
Backfill Section II									■																						
Activity in Section III										■	■			■																	
Lab Pack Inventory								■							■																
Backfill Section III														■																	
Activity in Section IV														■	■	■	■	■													
Backfill Section IV																						■									
Enforcement Sampling																							■	■							
Debris Sifting Activity																							■	■							
Survey of Structure																							■								
Drum Hazcatting																							■	■							
Lab Pack Bulking																									■						
Debris Load out																									■	■				■	
Decontamination of Structure																										■				■	
Structure Removal																													■	■	■



# EVOR PHILLIPS SITE ACTIVITIES

MAY 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Structure Removal																														
Demobilization Activities																														

300046

# EVOR PHILLIPS SITE ACTIVITIES

## AUGUST 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Soil Disposal				█	█	█	█	█																						
Demobilization Activities				█	█	█	█	█																						
Completion Date															█															

300047

# EVOR PHILLIPS SITE ACTIVITIES

## NOVEMBER 1997

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
PRP Drum Removal																														

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REMOVAL ACTION FACT SHEET

8/25/98

EVOR PHILLIPS LEASING

Old Bridge Township, Middlesex County, New Jersey

REGION: II

NPL: Yes

TOTAL PROJECT CEILING: \$451,084

OSC: Pane

INCIDENT CATEGORY: Illegal landfill possibly containing DOD waste.

START DATE: January 22, 1997

COMPLETION DATE: August 15, 1997

INCIDENT DESCRIPTION:

The EPL Site is located in Old Bridge Township, Middlesex County, New Jersey and consists of approximately 6 acres. It is located within 1,000 feet of the CPS/Madison Superfund Site and other industrial facilities. Three residences are located approximately 750 feet northwest and down slope of the Site. The cities of Perth Amboy and Sayreville both have water supply wells and ground water recharge ponds located within one mile downgradient of the Site.

Through the years, the Site served as an industrial waste treatment facility and a silver reclamation business. Operations at the Site have been inactive since September, 1986. Reports of buried waste on site have been confirmed through excavation of test pits.

MATERIALS:

In the early 1970's, drummed and bulk liquid wastes were reportedly disposed of in a ravine and in pits at the western end of the Site. It is also alleged, and documented by CJ, that as many as 5,000 drums containing chemical materials may be buried on-site. A box trailer filled with leaking drums and a 5,000 gallon tank trailer were also reportedly buried on the Site. Excavation activities undertaken by NJDEP to date have uncovered over 150 full drums containing various hazardous substances and over 350 drum carcasses.

300049

**THREATS:**

The NJDEP advised EPA that the area in question contained cylinder(s) and/or drum(s) of waste from the Department of Defense (DOD). The unknown volume and composition of drums or otherwise hazardous materials which may have been excavated during the action presented a serious threat of release, fire and/or explosion.

**ACTIONS:**

The EPL Site is a State lead NPL Site which was listed in 1983. In November, 1986, TRC Environmental Consultants, Inc. was tasked by NJDEP to initiate RI/FS activities. The final RI/FS reports for Operable Unit One (OU-1) were completed in April 1992. In September 1992, EPA signed a ROD addressing an interim remedy for on-site contaminated ground water and a final remedy for the disposal of buried drums. In February 1996, the PRPs signed an ACO with NJDEP and started demolition of the buildings and furnaces, and removal of buried drums. In June 1996, NJDEP performed a geophysical investigation to search for additional buried drums.

On October 13, 1996, EPA received a request from NJDEP to conduct a removal action on a 100' by 100' portion of the EPL Site. The requested removal activities included excavation of anomalies with potential DOD chemical agent(s) cylinders, drums and/or other highly contaminated materials. Following a detailed assessment, funding was authorized for a Superfund Removal Action to perform excavation at the suspected burial location and to stabilize and remove any hazardous materials, including DOD wastes, that might be uncovered.

**PRESENT STATUS:**

An action memorandum to initiate removal activities was signed on January 11, 1997. ERCS was mobilized on January 22, 1997. ERT performed additional geophysical studies to further refine the area in question. Soil, soil gas and water samples were taken along the perimeter of the anomalies and tested for chemical agents and their breakdown products. The results of that data were negative.

EPA constructed a containment structure approximately 120' by 90' by 36' high over the anomalies and equipped it with a

scrubber/carbon air treatment unit. The excavation was divided into four areas covering each of the identified anomalies. Excavation activities began on March 19, 1997 and were completed on April 18, 1997. No DOD waste was uncovered. A total of 35 drums and approximately 400 cubic yards of contaminated soil and debris were excavated. The contaminated soil and debris were staged in roll offs and shipped off site for disposal. The last roll off left the Site on August 8, 1997. The drums uncovered by EPA were disposed of by the RPs as part of the ACO they have with the NJDEP on November 5, 1997.

The DOD Technical Escort Unit was mobilized to support EPA activities on Site. The local OEM was activated and developed a contingency plan involving resources from both Old Bridge and Sayreville as well as the County. As part of the contingency plan, EPA installed a siren on site and activated the Community Alert Network (CAN). The CAN is an automated telephone message delivery system which is capable of reaching all impacted parties within minutes of notification.

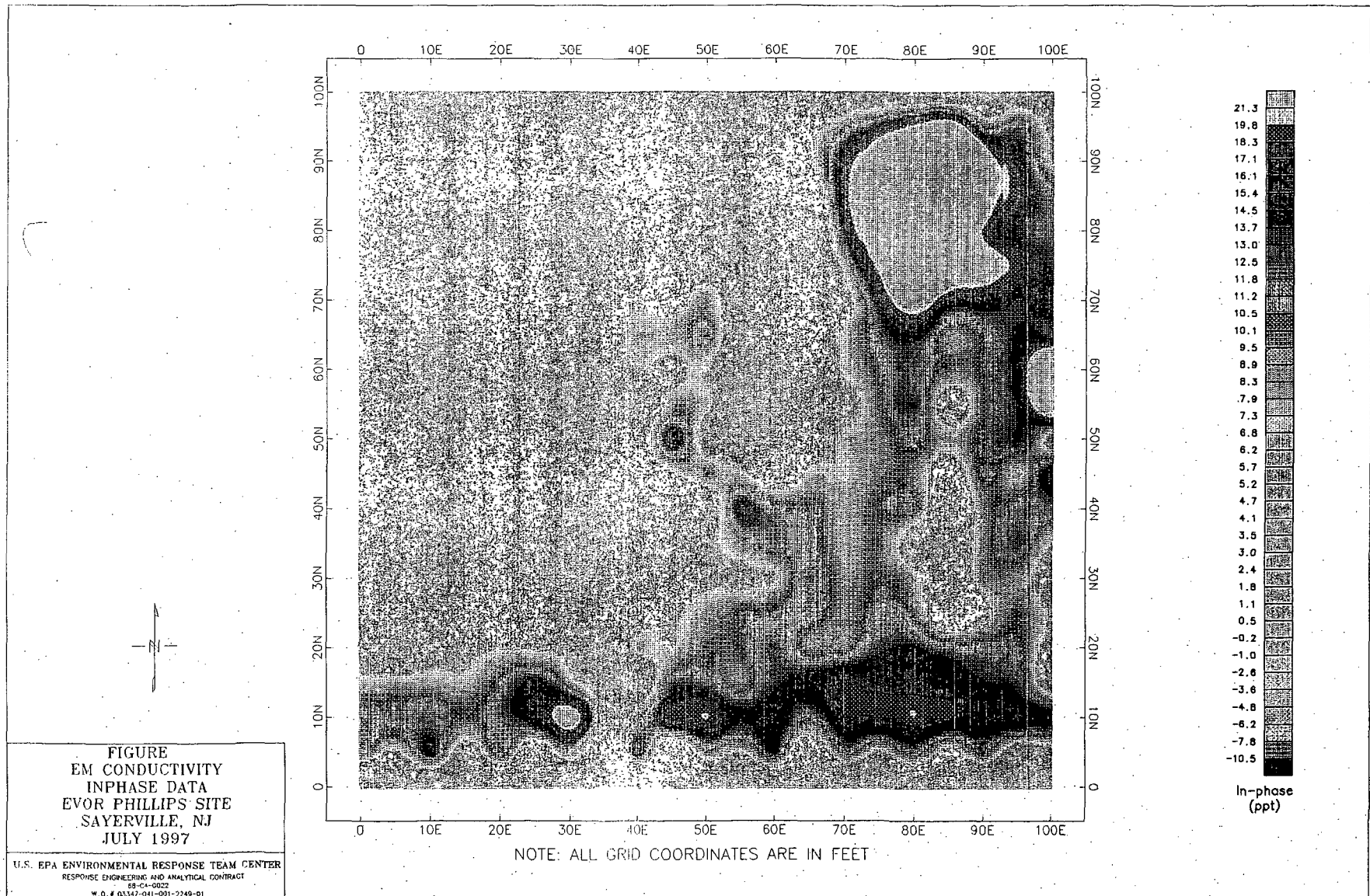
Due to the potential presence of DOD waste, an expanded community relations effort was enacted which included two public meetings, a public availability session and numerous site tours.

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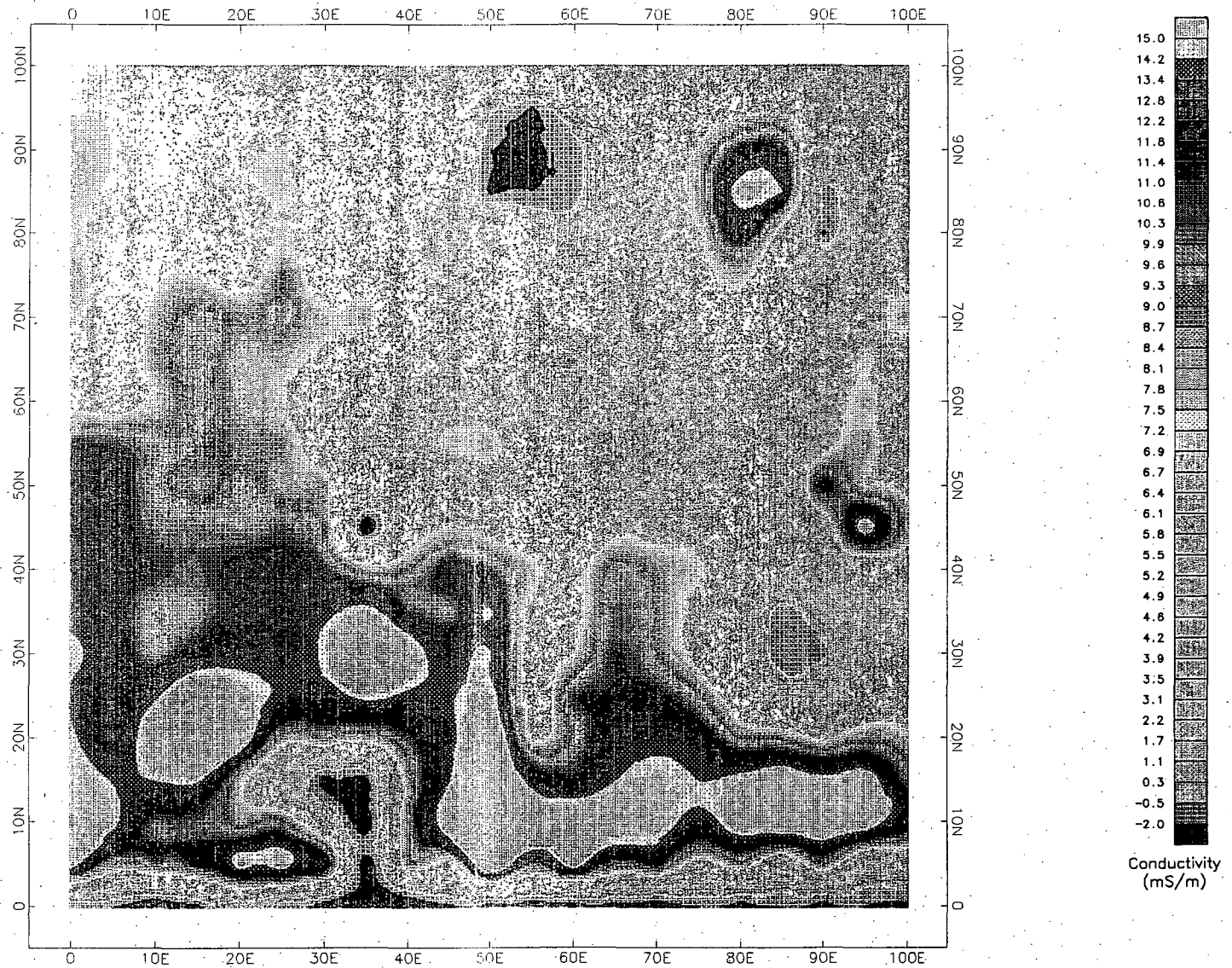


FIGURE  
EM CONDUCTIVITY  
QUADRATURE PHASE DATA  
EVOR PHILLIPS SITE  
SAYERVILLE, NJ  
JULY 1997

U.S. EPA ENVIRONMENTAL RESPONSE TEAM CENTER  
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT  
56-C-1-0072  
\* O # 03347-041-001-2248-01

NOTE: ALL GRID COORDINATES ARE IN FEET

c.1.b.

300055

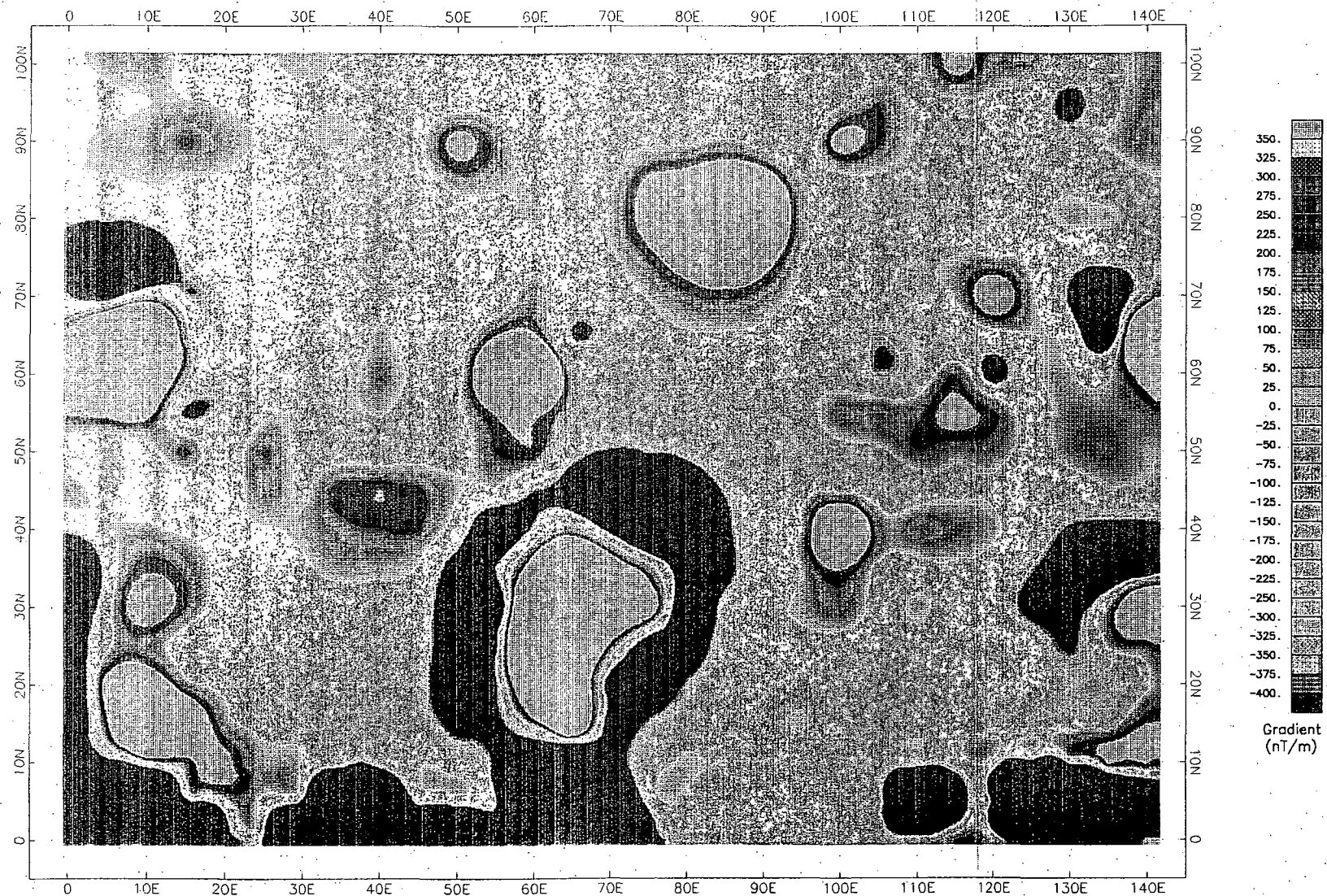


FIGURE  
MAGNETIC GRADIENT DATA  
AND ANOMALY LOCATIONS  
EVOR PHILLIPS SITE  
SAYERVILLE, NJ  
JULY 1997

NOTE: ALL GRID COORDINATES ARE IN FEET

300056

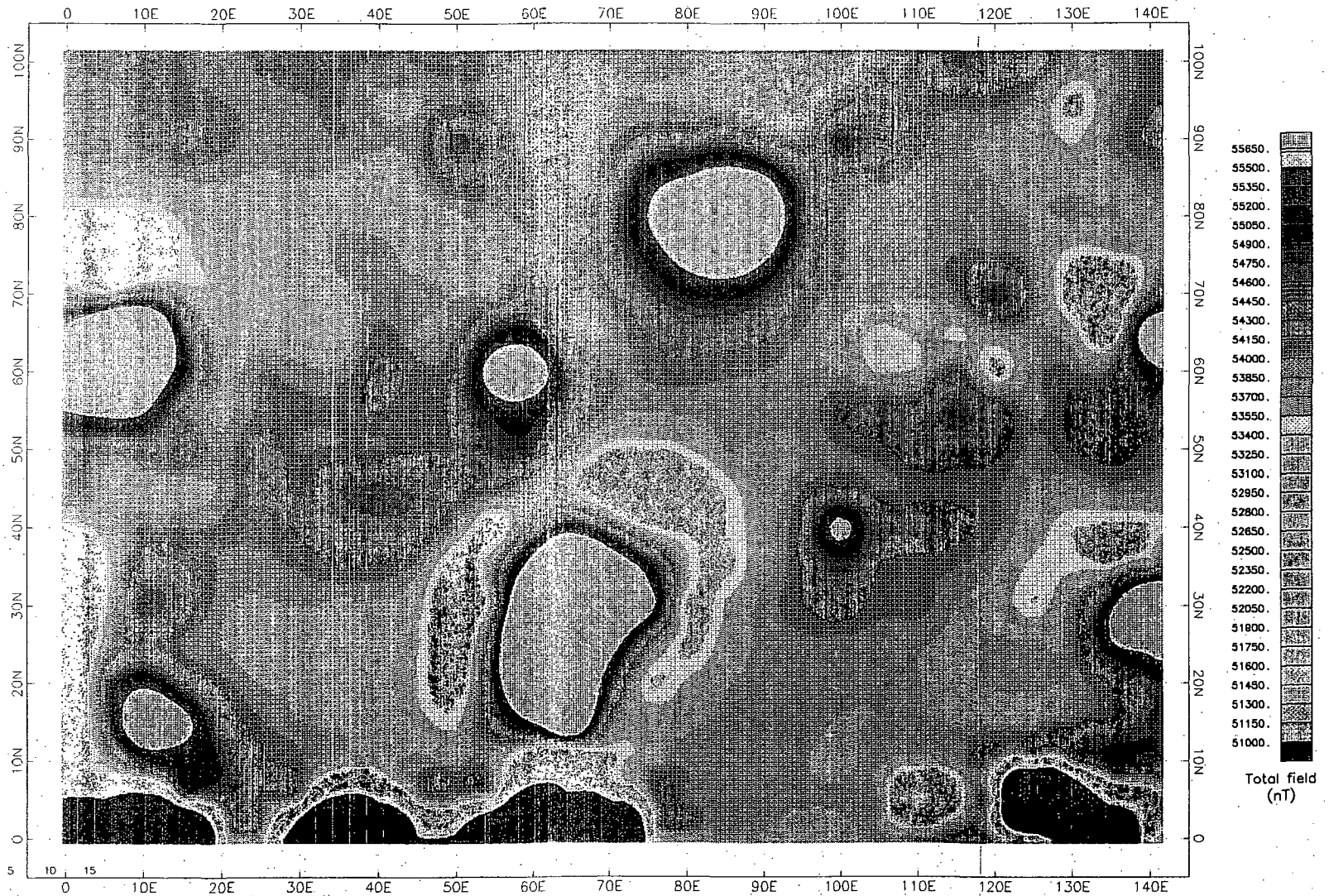
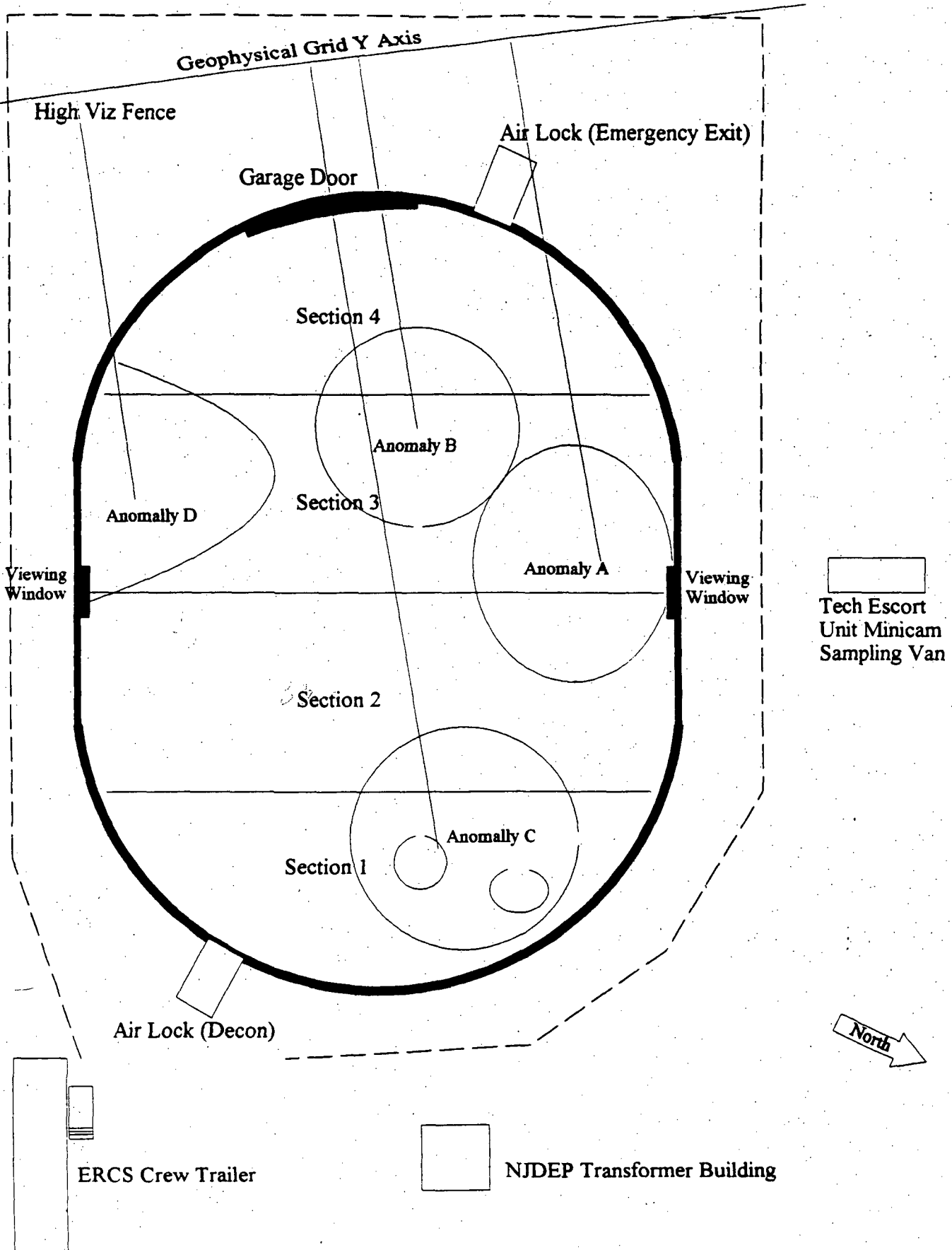


FIGURE  
MAGNETIC  
TOTAL FIELD DATA  
EVOR PHILLIPS SITE  
SAYERVILLE, NJ  
JULY 1997

U.S. EPA ENVIRONMENTAL RESPONSE TEAM CENTER  
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT  
EPA/600/9-97/010  
U.S. G.P.O. 1997-0-274-001



**EVOR PHILLIPS SITE** Note: Sections are approx. 30 ft. by 88 ft.

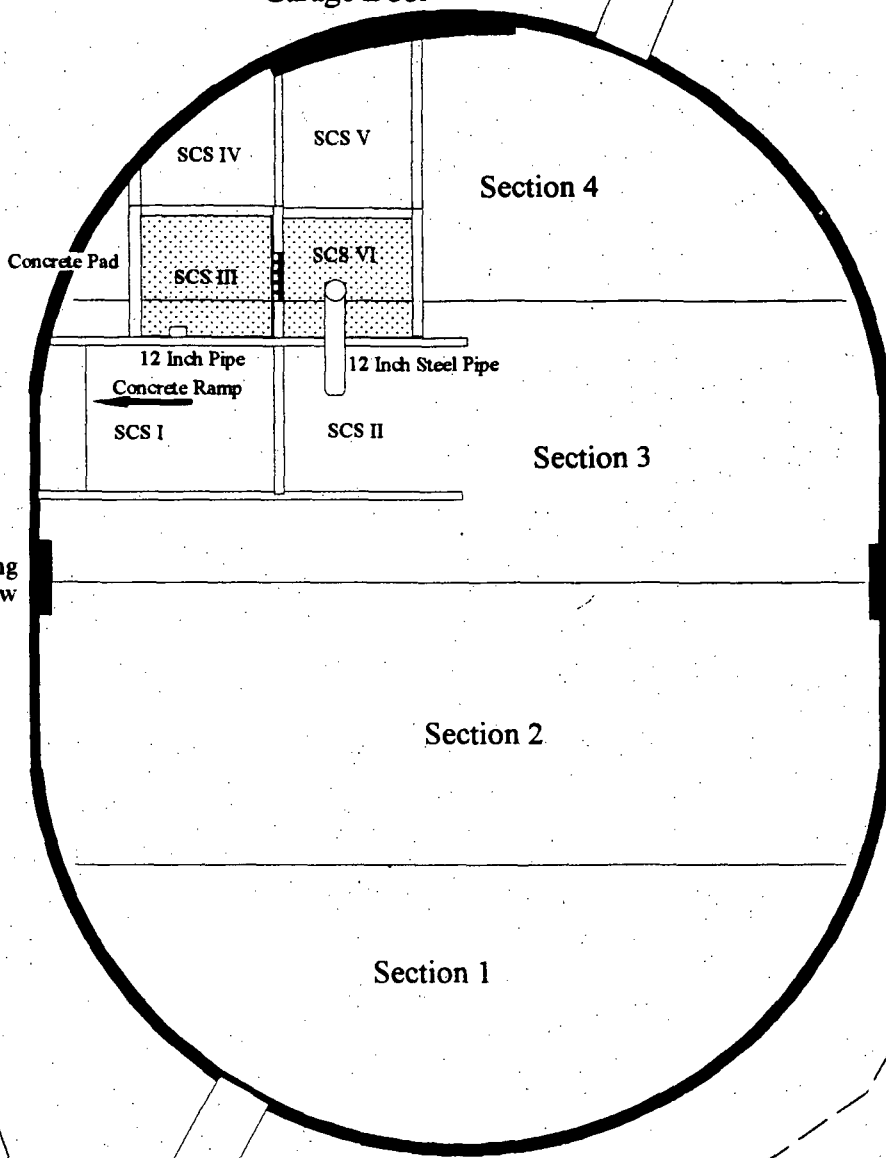
10 feet

Geophysical Grid Y Axis

High Viz Fence

Air Lock (Emergency Exit)

Garage Door



Viewing Window

Viewing Window

  
 Tech Escort  
 Unit Minicam  
 Sampling Van

Section 2

Section 1



Air Lock (Decon)




ERCS Crew Trailer

NJDEP Transformer Building

**EVOR PHILLIPS SITE**  
 Subsurface Structures

Note: Sections are approx. 30 ft. by 88 ft.  
 SCS = Subsurface Concrete Structures  
 = Indicates SCS Containing Trash  
 = Archway

  
 Approx. - 10 feet

NOTICE ABOUT OVERSIZED MAP

THIS MAP CAN BE FOUND IN THE ADMINISTRATIVE RECORD LOCATED AT: U.S. EPA SUPERFUND RECORDS CENTER, 290 BROADWAY, 18<sup>TH</sup> FLOOR, NY, NY 10007. TO MAKE AN APPOINTMENT TO VIEW THE MATERIAL PLEASE CONTACT THE RECORD CENTER AT (212) 637-4308.

FIGURE  
SITE MAP  
EVOR PHILLIPS SITE  
SAYERVILLE, NJ  
JULY 1997

249/evor.dwg 6/16/97

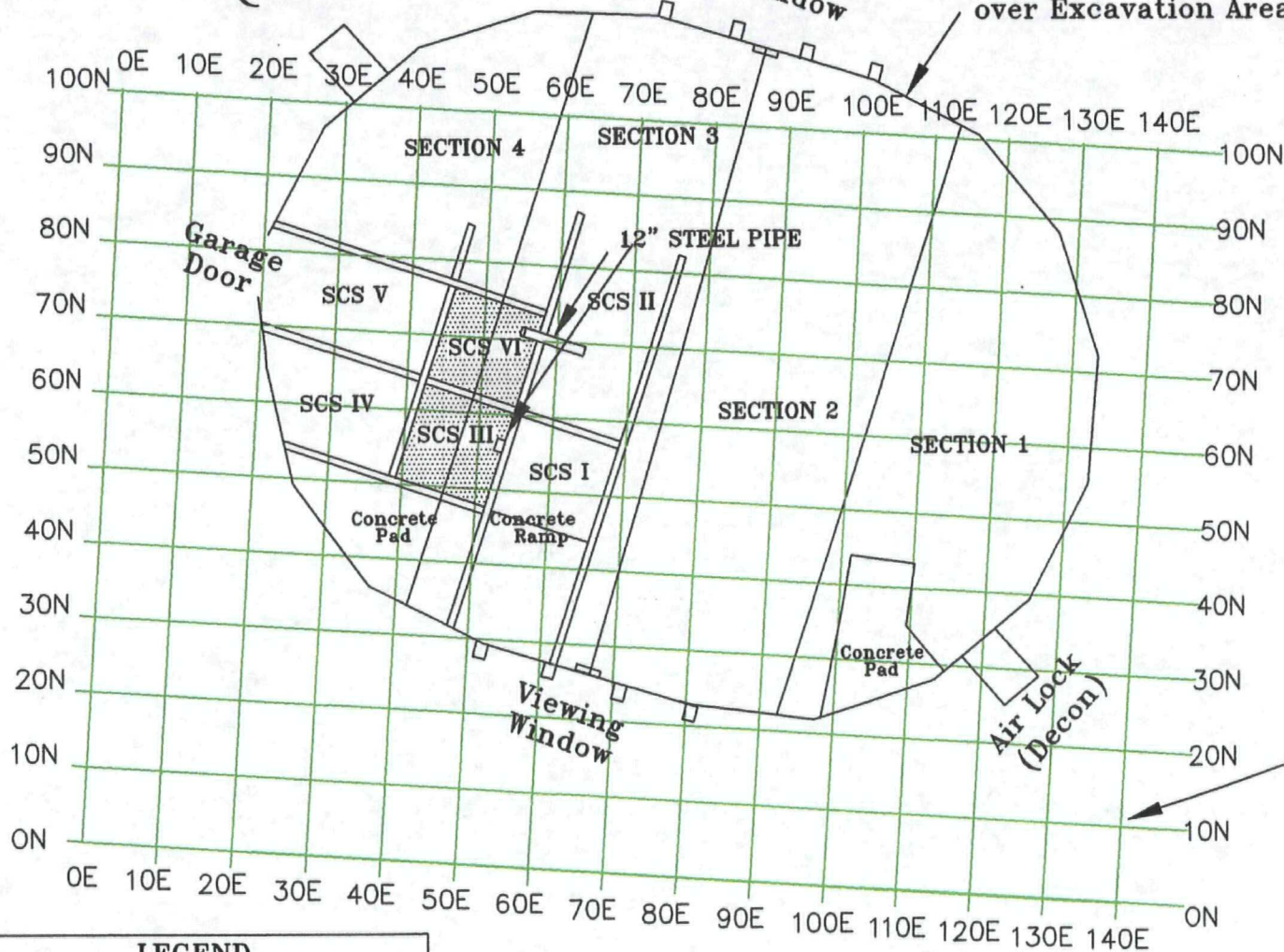
U.S. EPA ENVIRONMENTAL RESPONSE TEAM CENTER  
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT  
68-C4-0022  
W.D.# 03347-142-001-2249-01

Air Lock  
(Emergency  
Exit)

Viewing  
Window

Containment Structure  
over Excavation Area

300060



Geophysical Grid

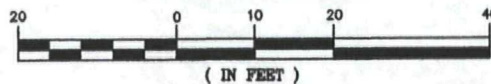
**LEGEND**

SCS I SUBSURFACE CONCRETE  
STRUCTURE

// CONCRETE

EXCAVATED BURIED TRASH

**GRAPHIC SCALE**



**FIGURE**  
**SUBSURFACE FINDINGS**  
**EXCAVATED AREA**  
**EVOR PHILLIPS SITE**  
**SAYERVILLE, NJ**  
**JULY 1997**

U.S. EPA ENVIRONMENTAL RESPONSE TEAM CENTER  
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT  
68-C4-0022  
W.D.# 03347-142-001-2249-01

C.S.

6/17/97  
19/EVOR-ADWG

D

300061



**Community Alert Network Telephone Communications List - UPDATED 3/7/97**

**LOCAL OFFICIALS**

- |     |   |                    |
|-----|---|--------------------|
| 1.  | Middlesex County Office of Emergency Management | 908-745-4400       |
| 2.  | Old Bridge LEPC                                 | 908-727-2511       |
| 3.  | Old Bridge Police Department                    | 908-721-4000       |
| 4.  | South Old Bridge Fire Department                | 908-679-4320       |
| 5.  | Old Bridge LEPC                                 | 908-360-1032       |
| 6.  | Old Bridge OEM                                  | 908-360-1715       |
| 7.  | Old Bridge OEM                                  | 212-437-1892       |
| 8.  | Sayreville Police Headquarters                  | 908-727-4444       |
| 9.  | Old Bridge Public Safety                        | 908-721-5600 x2080 |
| 10. | Old Bridge Mayor's Office                       | 908-721-5600 x2030 |
| 11. | Middlesex County Hazardous Materials Unit       | 908-727-6622       |
| 12. | Sayreville Mayor's Office                       | 908-627-3813       |
| 13. | Multi Care Dispatch                             | 800-541-7575       |

**RESIDENTS**

- |    |                 |              |
|----|-----------------|--------------|
| 1. | Rita Ferenci    | 908-721-7738 |
| 2. | Stephen Ferenci | 908-721-7747 |

**BUSINESSES**

- |    |                               |              |
|----|-------------------------------|--------------|
| 1. | Madison Industries            | 908-727-2225 |
| 2. | CPS Chemicals                 | 908-607-2700 |
| 3. | Manzo Trucking                | 908-721-6900 |
| 4. | Reclamation Technologies Inc. | 908-316-9678 |
| 5. | LORCO Petroleum Services      | 908-721-0900 |
| 6. | Enterprise Rent-A-Car         | 908-727-5757 |
| 7. | Bridge Disposal Office        | 908-566-1885 |
| 8. | Bridge Disposal Shop          | 908-727-0247 |

**STATE AND FEDERAL OFFICIALS**

- |    |                             |              |
|----|-----------------------------|--------------|
| 1. | EPA Hotline                 | 908-548-8730 |
| 2. | NJDEP Hotline               | 609-292-7172 |
| 3. | NJDEP Site Manager          | 609-292-2009 |
| 4. | Roy F. Weston               | 908-225-6116 |
| 5. | EPA Communications Division | 212-637-3665 |

## COMMUNITY ALERT NETWORK

INCIDENT REPORT 03/14/97

Name or Location	Telephone Number	Attempts			Status Codes	TTR Time	Date
		1	2	3			
BGM	908 5250330	10			10	14:01	03-14-1997
Bridge Disposal Offc	908 5661895	14			14	14:01	03-14-1997
Bridge Disposal Shop	908 7270247	10			10	14:01	03-14-1997
GPS Chemicals	908 6072700	10			10	14:01	03-14-1997
Conrail	908 8205601	10			10	14:01	03-14-1997
E H Allen	908 7272500	14			14	14:01	03-14-1997
EPA Communicatns Div	212 6373665	10			10	14:01	03-14-1997
EPA Hotline	908 5486730	14			14	14:01	03-14-1997
Enterprise Rentacar	908 7275757	8	8	8	8	14:07	03-14-1997
Ferenci, Rita	908 7217738	14			14	14:01	03-14-1997
Ferenci, Stephen	908 7217747	10			10	14:01	03-14-1997
Forté Pallet	908 7273879	10			10	14:01	03-14-1997
LORCO Petro Services	908 7210900	10			10	14:01	03-14-1997
Madison Industries	908 7272225	14			14	14:01	03-14-1997
Manzo Trucking	908 7216900	10			10	14:01	03-14-1997
Maricos Concreta	908 5251177	14			14	14:01	03-14-1997
Middlesex County OEM	908 7454400	10			10	14:01	03-14-1997
Middlesex Cty HazMat	908 7276622	14			14	14:01	03-14-1997
Multi Care Dispatch	800 5417575	10			10	14:01	03-14-1997
NJDEP Hotline	609 2927172	10			10	14:01	03-14-1997
NJDEP Site Manager	609 2922009	10			10	14:01	03-14-1997
Old Bridge LEPC	908 7272511	10			10	14:01	03-14-1997
Old Bridge LEPC	908 3601032	10			10	14:01	03-14-1997
Old Bridge Mayor Off	908 6077902	10			10	14:01	03-14-1997
Old Bridge OEM	908 3601715	10			10	14:01	03-14-1997
Old Bridge OEM	212 4371892	14			14	14:01	03-14-1997
Old Bridge Pol Dept	908 7214000	10			10	14:01	03-14-1997
P G Mobile Spring	908 3240393	10			10	14:01	03-14-1997
Reclamation Tech Inc	908 3169678	10			10	14:01	03-14-1997
Sayreville Mayor Off	908 6273813	10			10	14:01	03-14-1997
Sayreville Police HQ	908 7274444	10			10	14:01	03-14-1997
Scramco	908 7275915	10			10	14:01	03-14-1997
South Old Bridge FD	908 6794320	10			10	14:01	03-14-1997
Weston, Roy F	908 2256116	14			14	14:01	03-14-1997
Zoubek	908 7278080	14			14	14:01	03-14-1997

D.l.b.

300063

Community Alert Network Incident Report --- Summary Section

Session Results:

Phone Numbers Requested: 35  
 Phone Numbers Attempted: 35  
  
 1st Pass: 35  
 2nd Pass: 1  
 3rd Pass: 1  
 Total Calls Made: 37

Final Status of Calls  
 Messages Delivered: 24  
 Delivered and Repeated 10  
 Busy Signals: 0  
 No Answers: 1  
 No Ring Signals: 0  
 Intercepts: 0  
 Invalid Codes: 0  
 Valid Codes: 0

Status Code Definitions  
 10: Message Delivered  
 14: Delivered and Repeated  
 7: Busy Signal  
 8: No Answer  
 9: No Ring Signal  
 11: Intercept Tones  
 12: Invalid Code  
 13: Valid Code

Extended Status Codes

Can respond	0	9: Can respond (Yes)
Cannot respond	0	6: Cannot respond (No)
Understand message	0	8: Understand message
Do not understand	0	4: Do not understand
No response entered	0	10: Timed out

TTR-Time to Respond Time in minutes

	First Pass	Second Pass	Third Pass
Lines Used:	35	1	1
Start Time of Call Pass:	14:01	14:06	14:07
End Time of Call Pass:	14:04	14:06	14:07
Minutes Per Call Pass:	3	1	1

Elapsed Time of Call Session: 5 mins.

Telephone Line Calling Time Used 1.76 hours

Calling Date: 03/14/97  
 CAN Data Filename: D:\VAL\ANDKDJEO.CAL  
 Client: Evor Fix  
 Activator: MARK PANE



FLOODS

FIRES

POWER FAILURES

EVACUATION NOTICES

EXPLOSIONS

HAZ MAT ACCIDENTS

TENANT ALERT

NATURAL DISASTERS

SEVERE WEATHER WARNINGS

MISSING PERSONS

TRAIN DERAILMENT

DRILLS, TESTS & EXERCISES

Speed.

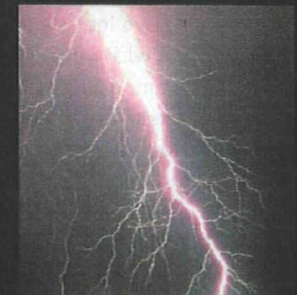
Service.

Technology.

Follow-up.

# CAN

## Instant Notification.



A unique  
telephone broadcast  
messaging service  
designed to work  
for you.

# CAN

**Community Alert Network® Inc.**  
301 Nott Street, Schenectady, NY 12305-1039

Phone: 518-382-8007  
Toll free: 800-992-2331  
Fax: 518-382-0675  
e-mail: [cancalls@ix.netcom.com](mailto:cancalls@ix.netcom.com)

Visit our WWW site: <http://www.can-intl.com>

Helping save lives since 1984.





**The right message.  
The right audience.  
Right now!**

**INSTANT NOTIFICATION.**

CAN is a unique service that contacts a predetermined of people—immediately—to deliver appropriate information and instructions when an urgent situation arises. Unlike radio or TV announcements, CAN delivers messages with targeted phone calls: your best bet for immediate contact, especially if your call goes out in the middle of the night.

**SOLUTIONS FOR THE INFORMATION AGE.**

Why didn't they contact me?" You would think someone would have let us know." These are phrases that no one with safety or emergency response responsibilities ever wants to hear. You can't rely on 'telephone trees' or other outmoded notification methods. Technological sophistication is no longer a luxury—it's expected.

**COMMUNICATION INSURANCE.**

With CAN services in place, you can rest assured that your crisis network is ready for use—24 hours a day. Those who receive your call will know that you have taken the steps and used technology to keep them informed.

To enjoy the benefits of CAN services, you won't need to purchase, lease or maintain any hardware or software. You won't need to hire any personnel. There are no complicated procedures to learn. Once you've supplied your list, or identified the geographic region to contact, your emergency notification service is ready to be implemented whenever you need it.

**THE RIGHT MESSAGE.**

In an emergency, you make one call to CAN. An on-duty staff member will help you to record a broadcast message,

or select one that you've already prepared. You determine the content of each call: Send multi-lingual messages—or different messages to different lists, simultaneously—you decide what works for your situation.

**MORE THAN A MESSAGE.**

Perhaps you require a response from the individuals on your calling list. CAN provides a simple interactive solution that collects touchtone 'answers' to prompts in your message. Responses are faxed to you immediately with your calling report.

You can also use CAN as a 'dial-in' service for information that needs to be updated frequently. Give your CAN number to your audience and they can call in 24 hours a day to hear your message. Update your message as often as you need to.

**THE RIGHT AUDIENCE.**

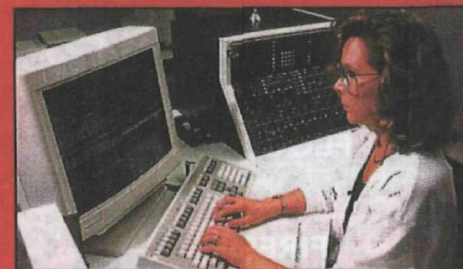
Only you know the people who need to be contacted when an incident occurs. You'll never wonder if your calling lists are up to date because you maintain them yourself. If your message includes sensitive information, CAN provides a security code option, requiring a listener to enter a pre-determined code before hearing your call.

If your needs are more geographic in nature, CAN services can target specific areas by ZIP code, zone, block, even street numbers. You select the lists or the areas that will receive your call, CAN supplies the telephone numbers for that region.

**RIGHT NOW.**

As soon as you've set up your message, calls begin immediately—at the rate of 6,000 an hour or more.

**How CAN works:**



- 1** In an emergency, you make one phone call to CAN.
- 2** You reach on-duty staff and record a message or select a pre-recorded one. Then select areas or lists to be called.
- 3** Calls start immediately at rates in excess of 6,000 per hour.
- 4** Immediately after a calling session a full report is faxed to you with the results of each call.

CAN's state-of-the-art systems provide you with the latest telephone technology, reaching cellular phones, beepers, pagers and TDD (hearing impaired machines).

**FAST, RELIABLE FOLLOW-UP.**

Results of each call are faxed to you immediately. These comprehensive reports include completed calls as well as calls that could not be completed, along with the reason (line was busy, no ring, no answer, operator intercept, etc.). If your message includes questions, tabulated results are available quickly.

Call CAN today to find out how your emergency network can go to work for you.

300066

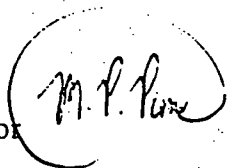


March 7, 1997

Community Alert Network Information

Dan Kowalski  
Response Manager

Mark P. Pane  
On Scene Coordinator



The following four messages are to be recorded and entered into the Community Alert Network (CAN) telephone emergency communications system for the Evor Phillips Site in Old Bridge New Jersey. It is my understanding that the CAN system will be on line by Thursday 3/13/97. Also attached are the phone numbers to be entered into system. Please let me know if there are any difficulties entering these numbers or recording the messages. As discussed a representative from CAN will be on site to demonstrate the operation of the system during the week of 3/10.

As discussed, a test of the system is tentatively scheduled for 3/14. Pending the outcome of that test and further input from the local OEM or LEPC, the phone list may be modified to include additional names. I understand it will take several days to make any changes to the system once the original list is submitted.

**MESSAGE 1**

This is a test of the Community Alert Network emergency telephone communication system. This is only a test. In the unlikely event of an emergency at the Evor Phillips Superfund Site on Cheesquake Road in Old Bridge, New Jersey, you will be notified by an automated telephone message, similar to this one, explaining what actions, if any, you need to take to ensure your safety during the emergency. If this were a real emergency, local Police and other emergency officials would provide you with personal instructions for your safety.

If you have any questions regarding this communication system or would like further information regarding the Evor Phillips Superfund Site, please feel free to contact the United States Environmental Protection Agency at (212) 637-3665.

**MESSAGE 2**

This is an emergency message from the Community Alert Network system established for the Evor Phillips Superfund Site on Cheesquake Road in Old Bridge, New Jersey. An incident has occurred on the site which has required the Environmental Protection Agency and its contractors along with local and County officials to respond to the Site. The incident is completely contained within the site and there is no cause for alarm at this time.

Emergency personnel will be on site until the threat from the incident has been completely removed. At this time, we ask that you remain near this telephone and await further information regarding the status of the incident. Should you choose to leave your home for personal reasons until the incident has been stabilized please feel free to do so.

If you have any questions regarding this communication system or would like further information regarding the Evor Phillips Superfund Site, please feel free to contact the United States Environmental Protection Agency at (212) 637-3665.

### MESSAGE 3

This is an emergency message from the Community Alert Network system established for the Evor Phillips Superfund Site on Cheesquake Road in Old Bridge, New Jersey. An incident has occurred on the site which has required the Environmental Protection Agency and its contractors along with local and County officials to respond to the Site. In the interests of safety we have determined that it may be necessary to temporarily evacuate selected homes and/or businesses. The evacuation process is being coordinated by the Police. Please remain indoors with all windows and doors closed until you are asked to evacuate by the Police or you receive another automated telephone message declaring the threat from the incident has been removed.

If you have any questions regarding this incident or would like further information regarding the Evor Phillips Superfund Site, please feel free to contact the United States Environmental Protection Agency at (212) 637-3665.

### MESSAGE 4

The emergency at the Evor Phillips Site has been stabilized and there is no longer a cause for alarm. If you would like details of the emergency or any other information regarding this Site please feel free to contact the Environmental Protection Agency at (212) 637-3665.







# THE COMPLETE SHELTER SYSTEM

by

## SPRUNG INSTANT STRUCTURES

### THE STRUCTURE

Designed and engineered on the principle of the "Membrane Stress Theory" the structure is the result of intensive research and development over the past two decades. The Sprung Instant Structure is constructed from extruded aluminum arches, integrally connected to an all-weather outer membrane of P.V.C. coated polyester scrim. This synthetic fabric is certified flame retardant.

### APPLICATION

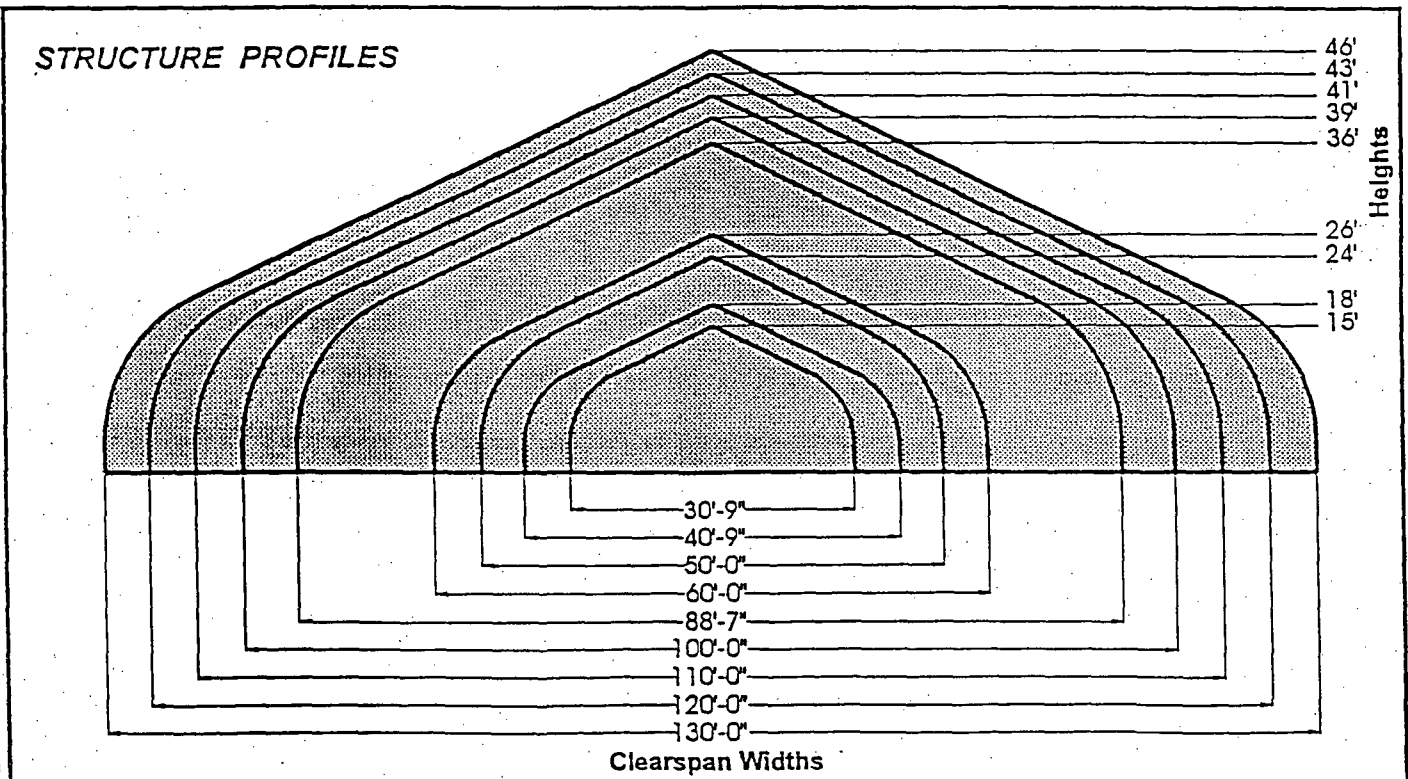
Sprung Instant Structures are the answer to any need for enclosed space, quickly and economically. Applications include construction, warehousing, environmental enclosures, exhibition space, military needs, inmate housing, entertainment and gaming facilities and recreational shelters. Aesthetically pleasing, the structures are available in a large range of sizes and are suited to both city and country environments.

### ENGINEERING

Sprung Structures may be designed to meet special requirements and to comply with local codes and standards. By design the structures shed snow. They also withstand high winds and hail. Standard pre-engineered drawings are available upon request.

### FLEXIBILITY

The freespan structure can be erected quickly, and requires little or no surface preparation. The modular design allows built-up areas of unlimited length, easy extension of an existing structure and quick dismantling and relocation.



**CALL:**  
**1-800-528-9899**  
 In Canada: 1-800-661-1163  
 or (403) 245-3371

Allentown, PA  
 Denver, CO  
 Indianapolis, IN  
 San Francisco, CA

Atlanta, GA  
 Houston, TX  
 Los Angeles, CA  
 Salt Lake City, UT



**SPRUNG**  
 INSTANT STRUCTURES INC.

Internet: <http://www.sprung.com>

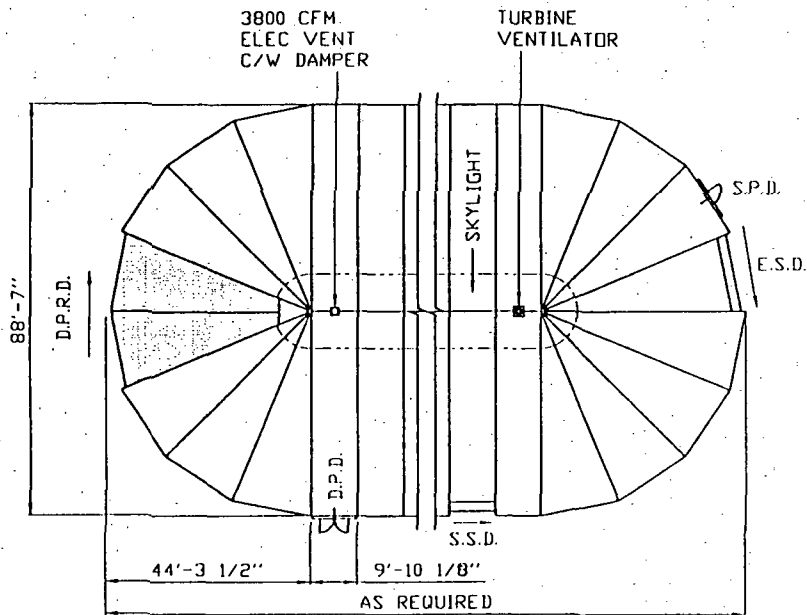
E.l.a.

# MODULAR RELOCATABLE STRUCTURES

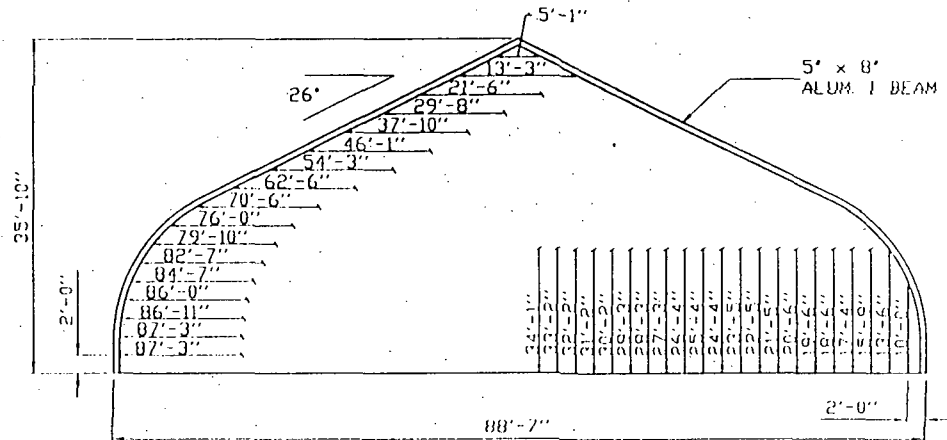
## Available From Inventory

- Doors:** A personnel door is provided with each structure. Doors can be placed in virtually any panel to meet customer requirements. Cargo, vehicle, oversize, double personnel, glass and custom doors, as well as hydraulically operated end scissor openings, are available as optional extras.
- Other Options:** Windows, electric fans, ventilators, wind driven turbines, and insulation packages are available as optional extras.
- Fabric:** The fabric is a durable P.V.C. coated polyester scrim which is fire retardent (i.e. self extinguishing) and treated with inhibitors to prevent degeneration from the ultraviolet rays of the sun. A guarantee of eight years for regular fabric and twelve years for premium fabric is provided.
- Erection:** Erection should proceed at the rate of 2,000 square feet per day. When necessary, this figure can be increased significantly by increasing the work force or extending the work day past 8 hours, or a combination of both. Dismantling should proceed at double this rate.
- It is the customer's responsibility to provide a work force of 4-10 unskilled labourers for erection of structures.
- A technical consultant will be provided to advise on the erection of the structure by the customer's unskilled work force. The consultant's transportation, at cost, and living expenses are the customer's responsibility. The consultant will also be provided on the same terms for the dismantling of leased structures.
- Equipment:** All hand tools required for erection will be provided. It will be the customer's responsibility to provide a crane or cherry picker for a short period of time to erect structures 50 feet wide or greater.
- Scaffolding and power to the site must also be supplied by the customer.
- Permits:** It is the customer's responsibility to obtain all necessary building and/or development permits, licenses or clearances of any type prior to erection and use of the structure.
- Footings:** Reasonably flat and firm ground requires little to no preparation or foundation for structures up to 60 feet in width. Anchorage is obtained with two drift pins at each column base plate. Structures 88.6 feet wide or greater should have concrete footings if a concrete pad is not being installed. Alternative methods are available if required.
- Drainage:** Drainage should be provided around the pad to permit adequate dissipation of rain water.
- Asphalt, concrete, or gravel pads should be crowned to assist in water runoff.
- Repairs:** Fabric and components can be repaired or replaced in a minimum time frame without affecting the stability of the structure.
- Rental:** Month to month rentals are available.
- Lease:** Leases are available for terms up to 5 years, with renewal options.
- Purchase Option:** Leases will have one of the following purchase options:
- i) If all lease payments have been made on time during the first three months of the lease period, 100% of these payments will be credited towards the purchase price, or,
  - ii) If all lease payments have been made on time during the first 12 or 24 months, (depending on original lease term), 40% of these payments will be credited towards the purchase price.
- Patents:** Patents are held in Canada, the United States and throughout the world.

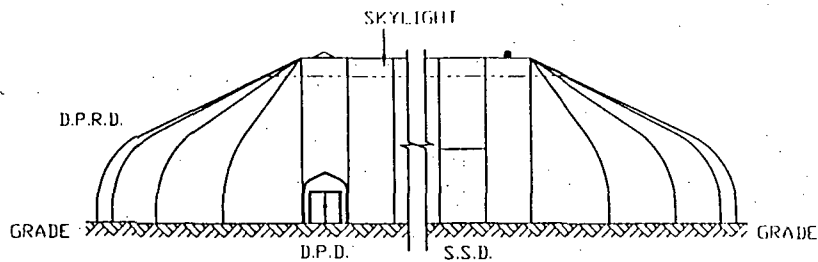
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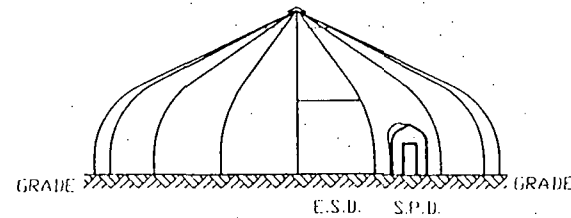
PLAN



SECTION  
SCALE: 1"=20'-0"



ELEVATION



END ELEVATION

NOTES:

1. DOOR SIZES AVAILABLE.	HEIGHT	BASE WIDTH	TOP WIDTH
E.S.D. - END SLIDING DOOR	16'-0"	16'-10"	14'-3"
S.S.D. - SIDE SLIDING DOOR	16'-0"	9'-6"	9'-6"
D.P.R.D. - DOUBLE PANEL ROLLING DOOR	32'-0"	33'-0"	4'-7"
D.P.D. - DOUBLE PERSONNEL DOOR	6'-8"	6'-0"	6'-0"
S.P.D. - SINGLE PERSONNEL DOOR	6'-8"	3'-0"	3'-0"



SPRUNG INSTANT STRUCTURES

88'-7" STRUCTURE

SCALE:  
1"=40'-0"

DATE:  
SEPT. 18, 1996

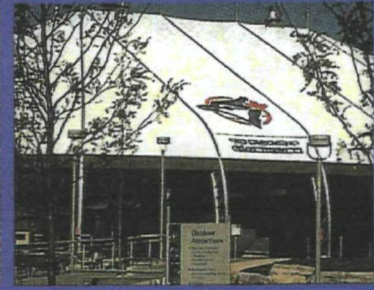
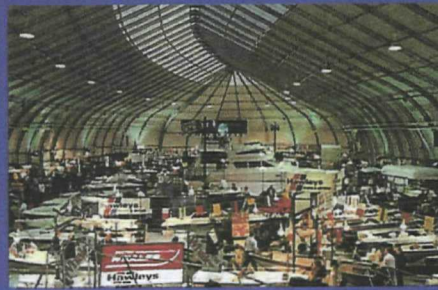
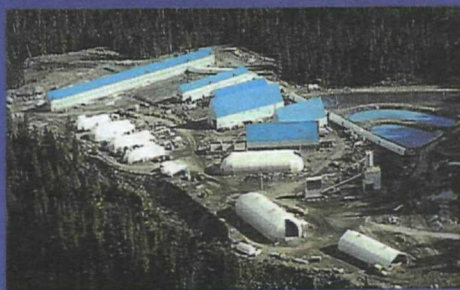
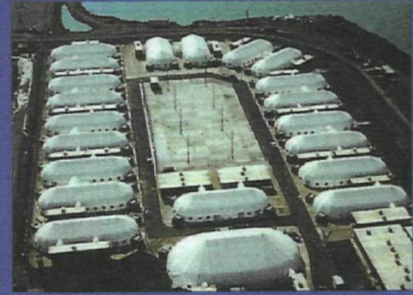
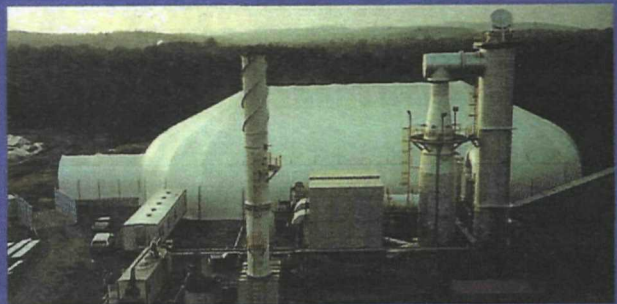
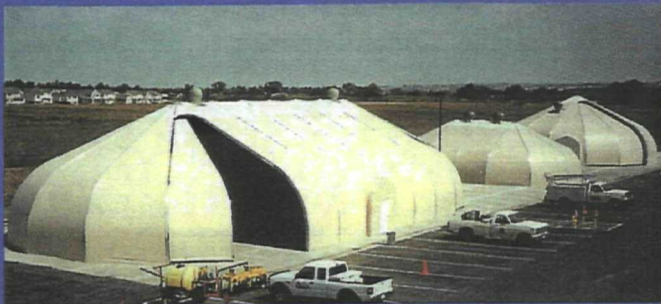
DRAWING #  
S-88

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E.I.C.



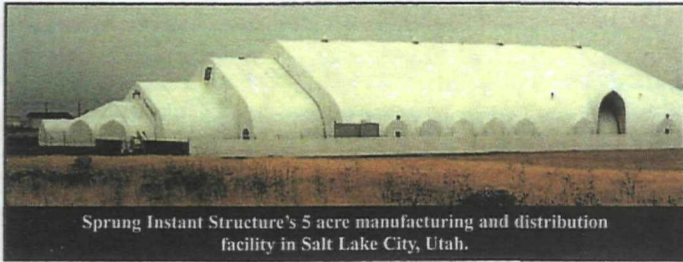
# *SPRUNG INSTANT STRUCTURES INC.*



## *MANUFACTURERS OF STRESSED MEMBRANE STRUCTURES*

# THE COMPLETE SHELTER SYSTEM

The Sprung Structure is designed and engineered to accommodate

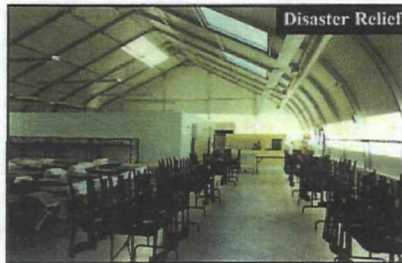


Sprung Instant Structure's 5 acre manufacturing and distribution facility in Salt Lake City, Utah.

## THE STRUCTURE

The Sprung Structure is constructed from extruded aluminum arches, integrally connected to a highly tensioned all-weather outer membrane.

The membrane is a durable P.V.C. coated polyester scrim treated with U.V. inhibitors. It is fire retardant (i.e., self extinguishing), California State Fire Marshall approved and passes UBC 55-1, NFPA 701, UL 214 and ASTM E84.



Disaster Relief

## ENGINEERING

Sprung Structures can be designed to meet windloads in excess of 155 mph and by design shed snow. Sprung Structures may be designed to meet special requirements and to comply with virtually any local codes and standards.



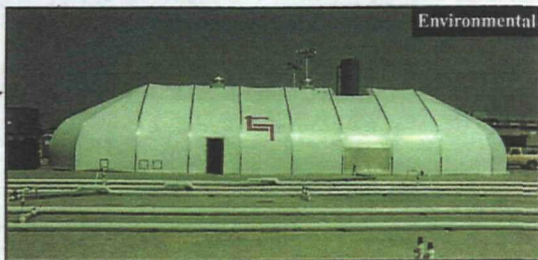
Mining

## APPLICATIONS

The Sprung Structure is utilized in virtually every segment of industry in every climatic zone. Temporary or semi-permanent, Sprung Structures have been utilized for: Airline & Cargo, Amusement Parks, Churches & Educational Facilities, Construction & On Site Warehousing, Disaster Relief, Environmental, Exhibitions, Gaming, Gold, Inmate Housing, Military, Oil & Gas, Public Works, Sports & Recreation and Sporting Venues.



Construction Site



Environmental



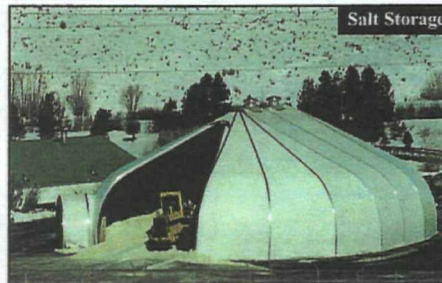
Aviation

## LIMITED FOUNDATIONS

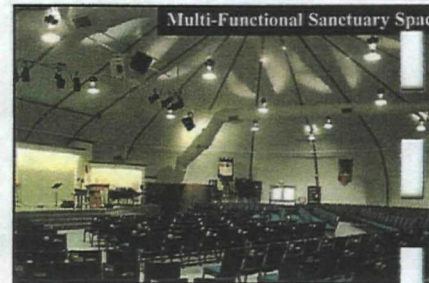
Sprung Structures can be erected on any reasonably firm ground surface. Foundations are not required for structures up to and including 88.6 feet wide. Small footings are required on wider structures.

### BENEFITS:

- Substantial cost savings on site preparations.
- Minimal site restoration following relocation.



Salt Storage



Multi-Functional Sanctuary Space



Golf Cart Storage

## AVAILABLE IMMEDIATELY

With over two million square feet in inventory, Sprung Structures can normally be shipped anywhere in the world within days. Approximately 2,000 square feet can be erected per day with a crew of six laborers under the supervision of Sprung Instant Structure's factory trained technical consultant.

### BENEFITS:

- Start your project immediately.

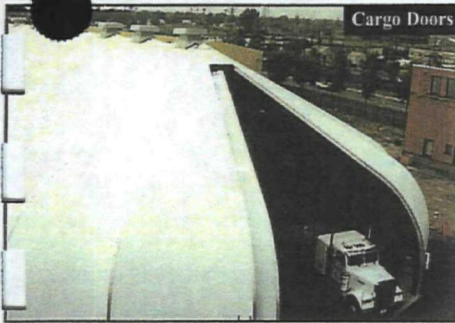
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No other system gets you in business faster, is more

E.2.b.

# BY SPRUNG INSTANT STRUCTURES

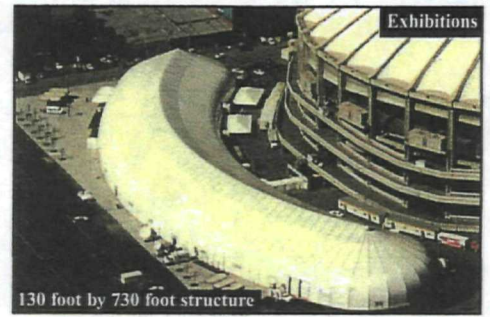
*the world's need for enclosed space quickly and economically.*



Cargo Doors

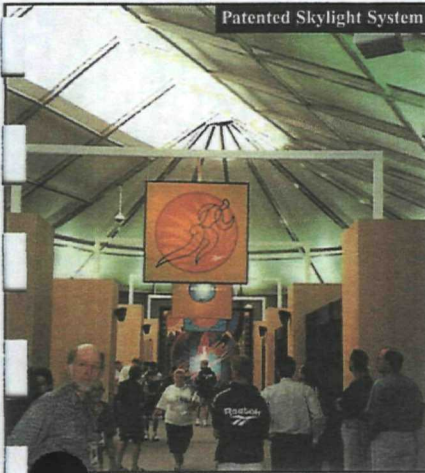
**SHIPPING**  
Up to 20 thousand square feet of Sprung Structure can be shipped on one flat bed truck or in one standard 40 foot container.

- BENEFITS:**
- When compared to conventional construction, Sprung Structures represent dramatically lower shipping costs anywhere in the world.
  - Ideal for remote locations.



Exhibitions

130 foot by 730 foot structure



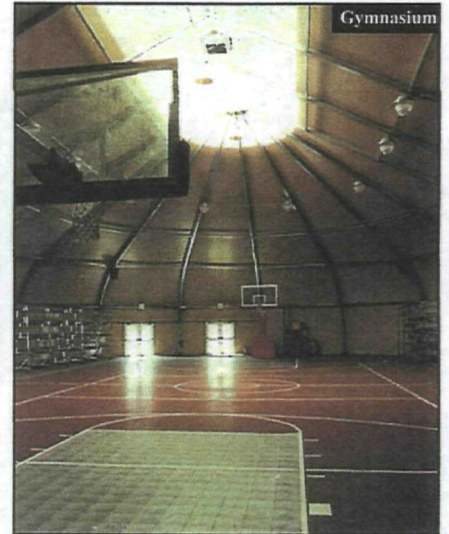
Patented Skylight System



Crane Lifiable

**RELOCATABLE**  
Sprung Structures are 100% relocatable.

- BENEFIT:**
- Flexibility offers substantial savings.



Gymnasium

**OTHER FEATURES:**

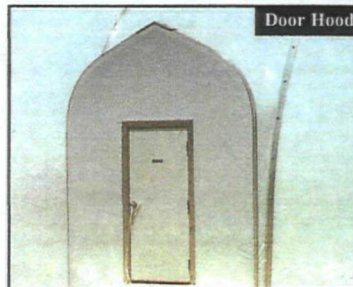
- Designed to accommodate doors or windows of any size.
- Requires little or no maintenance.
- Can be completely environmentally controlled.
- Door hoods to deflect snow and rain.
- Patented skylight system.
- Connecting corridors.

**OPTIONAL INSULATION PACKAGES**



Fiberglass insulation specified to customer needs.

Insulation system finished with an attractive integrally tensioned interior liner.



Door Hood



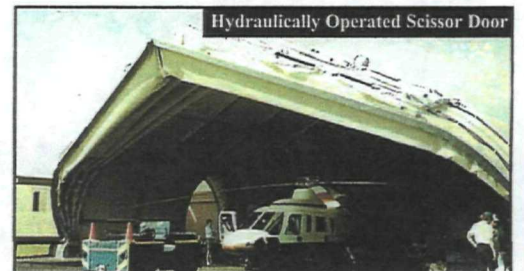
Connecting Corridor

**LEASE OR PURCHASE**  
Sprung Instant Structures provide a number of attractive lease programs, all with options to purchase.

- BENEFITS:**
- Lease of a structure allows capital to be allocated to other projects.
  - Provides a highly economical solution for temporary applications.

**GUARANTEE**  
Sprung Instant Structures offer a pro-rata guarantee of 25 years on the aluminum substructure and 8 and 12 years on two membrane alternatives.

- BENEFIT:**
- Proven longevity and experience.



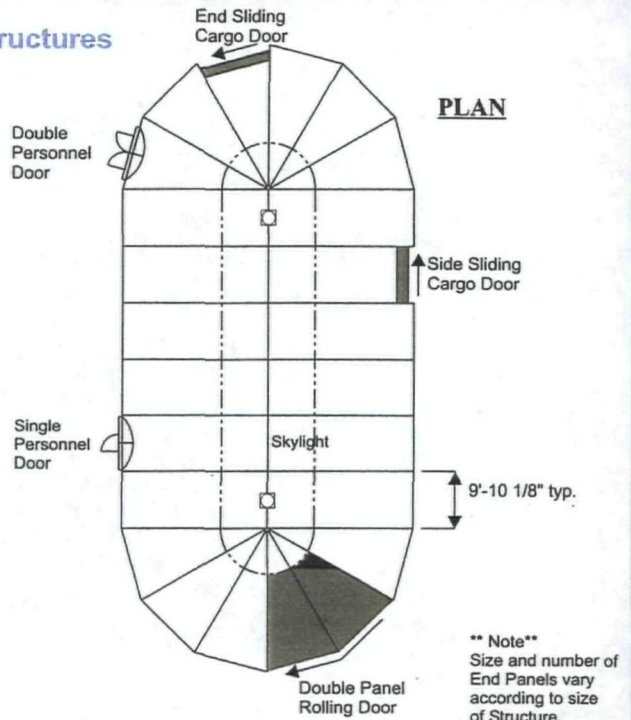
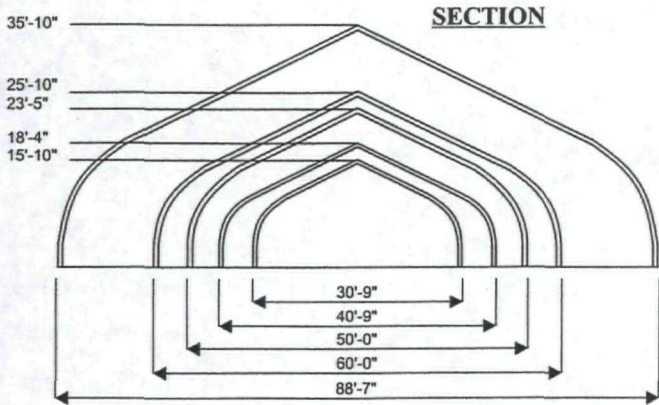
Hydraulically Operated Scissor Door

*onomical and offers more flexibility for the future!*

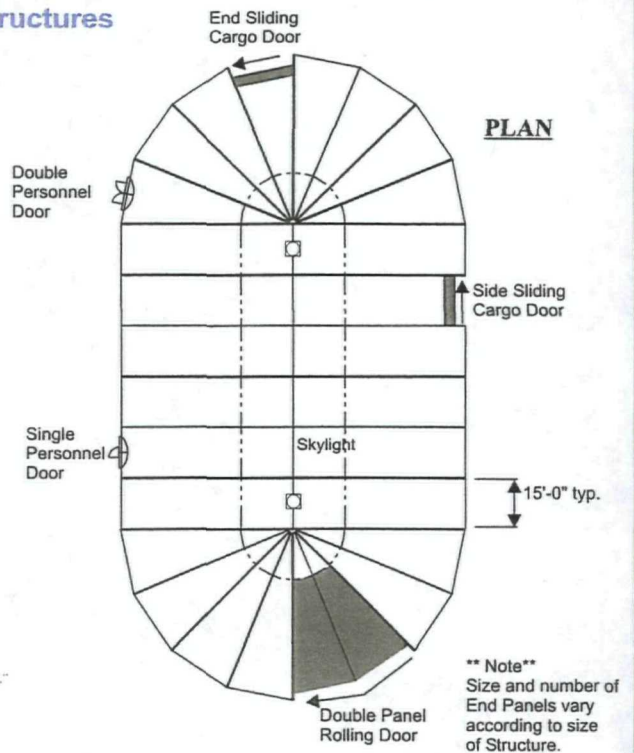
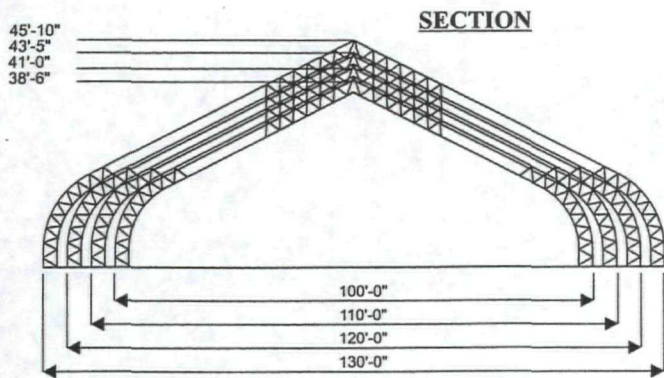
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300075

### 30' to 88.6' Wide Structures



### 100' to 130' Wide Structures



#### ADDITIONAL RESOURCES:

1. Comprehensive promotional video.
2. 15 different industry specific brochures available.
3. **Internet Home Page.** An extensive picture archive available for viewing, <http://www.sprung.com>
4. Regional offices located throughout the U.S.



**CALL TOLL FREE AT 1-800-528-9899**  
In Canada: 1-800-661-1163 or (403) 245-3371



**Sprung Instant Structures Inc.®**  
**Instant Structures®**

PATENTED WORLDWIDE

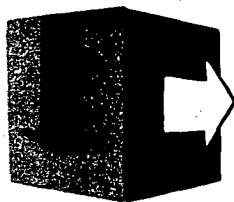
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- Allentown, PA
- Atlanta, GA
- Denver, CO
- Houston, TX
- Indianapolis, IN
- Los Angeles, CA
- San Francisco, CA
- Salt Lake City, UT

300076





**DESCRIPTION**

UNISORB "AXB" series extruded activated carbons are manufactured from selected grades of bituminous coal by steam activation under strictly controlled conditions. The result is a product with a highly developed pore structure, good resistance to attrition, and uniform particle size with very low resistance to flow. These carbons are impregnated with a specially formulated caustic solution making them particularly effective for removing acidic compounds while still being able to adsorb many other compounds.

**APPLICATION**

UNISORB "AXB" series caustic impregnated carbons are particularly desirable for removing acidic compounds such as hydrogen sulfide, mercaptans, hydrochloric acid, chlorine, nitrogen oxides, and sulfur oxides. This performance makes these carbons very effective in corrosion control at refineries, chemical plants, and paper mills and in odor control at wastewater treatment plants, and lift stations.

**PROPERTIES and SPECIFICATION**

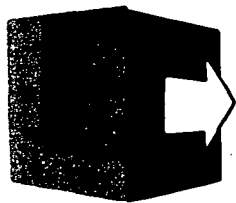
	<b>AXB 204</b>	<b>AXB 304</b>	<b>TESTING METHOD</b>
Particle Size	4 mm	4 mm	
Pressure Drop, in./ft. @ 50 fpm	1.2	1.2	Unisorb WCJT-3
Moisture, %	15	15	ASTM D2867
Hydrogen Sulfide Capacity, g/cc	≥.12	≥.14	Calgon TM41R
Hardness	≥96	≥96	ASTM D3802
Apparent Density lb./ft. <sup>3</sup>	36	36	ASTM D2854

Nothing herein shall be deemed to be a warranty or representation, express or implied, that the use of such information or the use of the goods described is fit for any particular purpose alone or in combination with other goods and/or processes, or that their use does not conflict with existing patent rights. 7/1/96

P.O. BOX 388 • SO. HOUSTON, TX 77587 • (713) 943-3753 • FAX: (713) 943-7313

F.l.a.

300078



## DESCRIPTION

UNISORB "MARK 5" air purification spheres are manufactured by impregnating activated alumina with a specially formulated proprietary solution under carefully controlled conditions. The resulting product has a well developed pore structure, good resistance to attrition, and very uniform size and shape with an extremely low resistance to flow. UNISORB "MARK 5" reacts with contaminants producing stable solids that will not desorb. It does not support combustion.

## APPLICATION

UNISORB "MARK 5" is designed to remove halogens such as fluorine, chlorine, bromine, and iodine. It can also remove many acidic compounds such as hydrochloric acid, sulfuric acid, nitrogen oxides, etc. It is particularly desirable for applications in which conditions may support combustion or where very low pressure drops are required.

<b>CHARACTERISTICS</b>	<b>VALUE</b>	<b>TEST METHOD</b>
Particle Size	4x8	ASTM D2862
Moisture, %	15	ASTM D2867
Mean Particle Diameter, mm (min.)	3.9	Calgon TM-9
Head Loss Per ft. Bed Depth @ 50 fpm, IWG	0.7	Unisorb WCJT-3
Hardness Number (min.)	80	ASTM D3802
Crush Strength, lb. (min.)	5	Unisorb WCJT-1
Apparent Density, g/cc (lb./ft. <sup>3</sup> )	0.08 (50)	ASTM D2854

Nothing herein shall be deemed to be a warranty or representation, express or implied, that the use of such information or the use of the goods described is fit for any particular purpose alone or in combination with other goods and/or processes, or that their use does not conflict with existing patent rights. 7/1/96

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F.l.b.

300079

**Material Safety Data Sheet**

May be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

**U.S. Department of Labor**

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OBM No. 1218-0072

IDENTITY (As used on Label and List)

UNISORB "AXB" and "AGB" SERIES

Note: Blank spaces are not permitted. If any item is not applicable, or no  
information is available, the space must be marked to indicate that.

**Section I**

Manufacturer's Name UNISORB CORPORATION	Emergency Telephone Number (713) 943-3753
Address (Number, Street, City, State, and ZIP Code) 1310 GENOA STREET	Telephone Number for Information (713) 943-3753
SOUTH HOUSTON, TX. 77587	Date Prepared AUGUST 1, 1996
	Signature of Preparer (Optional)

**Section II - Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
Activated Carbon: Activated Charcoal	NONE	NONE	NONE	NONE
CAS - 7440-44-0				
Potassium Hydroxide: Caustic Potash:	2 mg/m <sup>3</sup> (ceiling)	2 mg/m <sup>3</sup> (ceiling)	NONE	NONE
CAS - 1310-58-3				

**Section III - Physical/Chemical Characteristics**

Boiling Point	N/A	Specific Gravity	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (Air = 1)	N/A	Evaporation Rate	N/A

Solubility in Water

Insoluble

Appearance and Odor

Black granuals or pellets, no odor

**Section IV - Fire and Explosion Hazard Data**

Flash Point (Method Used) Not Flammable	Flammable Limits NONE	LEL N/A	UEL N/A
Extinguishing Media Water, copious amounts.			
Special Fire Fighting Procedures None			

Unusual Fire and Explosion Hazards

Contact with strong oxidizing agents, or with high concentrations of combustible material may result in fire. Fresh KOH-impregnated activated carbon may react exothermically in air. If fresh KOH-impregnated carbon is exposed to air under static conditions, its temperature may continue to rise until it ignites. Therefore, when KOH-impregnated carbon is loaded into its vessel, the manufacture's start-up instructions should be rigorously followed and the design air flow should be started when the loading is complete. If there is an unaboidable interruption in air flow through a loaded vessel, the temperature of the bed should be monitored when the bed is static and for several hours after the air flow is restarted. If the temperature continues to rise and an ignition starts, the oxidation may be quenched by water spray.

**Section V - Reactivity Data**

Stability	Unstable		Conditions to Avoid	NONE
	Stable	X		

Incompatibility (Materials to Avoid)  
 Strong oxidizers such as ozone and liquid oxygen, and high concentrations of combustible matter.

Hazardous Decomposition or Byproducts  
 NONE

Hazardous Polymerization	May Occur		Conditions to Avoid	NONE
	Will Not Occur	X		

**Section VI - Health Hazard Data**

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes

Health Hazards (Acute and Chronic)  
 Unimpregnated activated carbon is a stable, essentially non-toxic substance. Potassium hydroxide is a strong alkali that is corrosive to all body tissues with which it comes in contact. In KOH-impregnated carbon, the potassium hydroxide is strongly fixed to the carbon and not readily released to dry body tissues with which it comes in contact. However, the KOH can be leached out of the carbon by soaking it with water, in which case the leachate must be treated as a water solution of KOH.

Carcinogenicity: NTP? IARC Monographs? OSHA Regulated  
 Not classified by NTP, IARC, or OSHA.

Signs and Symptoms of Exposure  
 No consistent patterns have been established.

Medical Conditions  
 Generally Aggravated by Exposure None established

Emergency and First Aid Procedures  
 EYES: Flush with large amounts of water for at least 15 min. INGESTION: Give large quantities of water. Do not induce vomiting. INHALATION: Remove to fresh air. SKIN: Wash with plenty of soap and water. Seek medical attention if irritation persists.

**Section VII - Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled  
 Sweep up spill and discard in protected refuse container.

Waste Disposal Method  
 Dispose in accordance with local, state and federal regulations.

Precautions to Be Taken in Handling and Storing  
 Store in sealed containers and in a cool, dry location.

Other Precautions  
 NONE

**Section VIII - Control Measures**

Respiratory Protection (Specify Type)  
 Wear NIOSH approved respiratory protection if excessive dust is generated.

Ventilation	Local Exhaust	Recommended	Special	NONE
	Mechanical (General)	Recommended	Other	NONE

Protective Gloves Rubber gloves recommended Eye Protection Face shield or goggles

Other Protective Clothing or Equipment  
 Normal work clothing covering arms and legs should be worn.

Work Hygiene Practices  
 NONE

300081

# Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

# U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OBM No. 1218-0072

IDENTITY (As used on Label and List)  
UNISORB MARK 5

Note: Blank spaces are not permitted. If any item is not applicable, or no  
information is available, the space must be marked to indicate that.

## Section I

Manufacturer's Name UNISORB CORPORATION	Emergency Telephone Number (713) 943-3753
Address (Number, Street, City, State, and ZIP Code) 1310 GENOA STREET SOUTH HOUSTON, TX 77587	Telephone Number for Information (713) 943-3753 Date Prepared August 1, 1996 Signature of Preparer (Optional)

## Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
Aluminum Oxide: Activated Alumina	15mg/m <sup>3</sup> (TWA)	10mg/m <sup>3</sup> (TWA)	None	
Proprietary Components	2mg/m <sup>3</sup> (ceiling)	2mg/m <sup>3</sup> (ceiling)	None	
Proprietary Components	15mg/m <sup>3</sup> (TWA)	10mg/m <sup>3</sup> (TWA)	None	

## Section III - Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity	3.2
Vapor Pressure (mm Hg.)	N/A	Melting Point	2050°C
Vapor Density (Air = 1)	N/A	Evaporation Rate	N/A
Solubility in Water	Insoluble		
Appearance and Odor	Yellow spheres, no odor		

## Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) Not Flammable	Flammable Limits NONE	LEL N/A	UEL N/A
Extinguishing Media Foam, Carbon Dioxide or Dry Chemical			
Special Fire Fighting Procedures Wear NIOSH-approved self-contained breathing apparatus			
Unusual Fire and Explosion Hazards Toxic gases may be evolved.			

300082

**Section V - Reactivity Data**

Stability	Unstable		Conditions to Avoid NONE
	Stable	X	

Incompatibility (Materials to Avoid) Strong acids and strong oxidizers

Hazardous Decomposition or Byproducts Sulfur Dioxide

Hazardous Polymerization	May Occur		Conditions to Avoid NONE
	Will Not Occur	X	

**Section VI - Health Hazard Data**

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes

Health Hazards (Acute and Chronic)  
Acute: May be irritating to body tissues.  
Chronic: No known chronic health hazards.

Carcinogenicity: NTP? IARC Monographs? OSHA Regulated  
Aluminum Oxide: Not Classified by NTP, IARC, or OSHA.

Signs and Symptoms of Exposure  
Irritation of the eyes. Irritation of mucous membranes/sneezing.  
Possible skin irritation.

Medical Conditions  
Generally Aggravated by Exposure Irritation of open wounds or burns.

Emergency and First Aid Procedures  
EYES: Flush with large amounts of water for at least 15 min. INGESTION: Give large quantities of water. INHALATION: Remove to fresh air.  
SKIN: Wash with plenty of soap and water. Seek medical attention if irritation persists.

**Section VII - Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled  
Sweep up spill and discard in protected refuse container. To clean floors, flush with water into sewer if permitted by Federal, State and local regulations.

Waste Disposal Method  
New material may be disposed of in landfill. Used material that has been exposed to toxic chemicals should be examined and disposed of in accordance with applicable regulations.

Precautions to Be Taken in Handling and Storing  
Handle in accordance with control measures below. Store in sealed containers and in a cool, dry location.

Other Precautions  
NONE

**Section VIII - Control Measures**

Respiratory Protection (Specify Type)  
Wear NIOSH approved respiratory protection if exposure limits are exceeded.

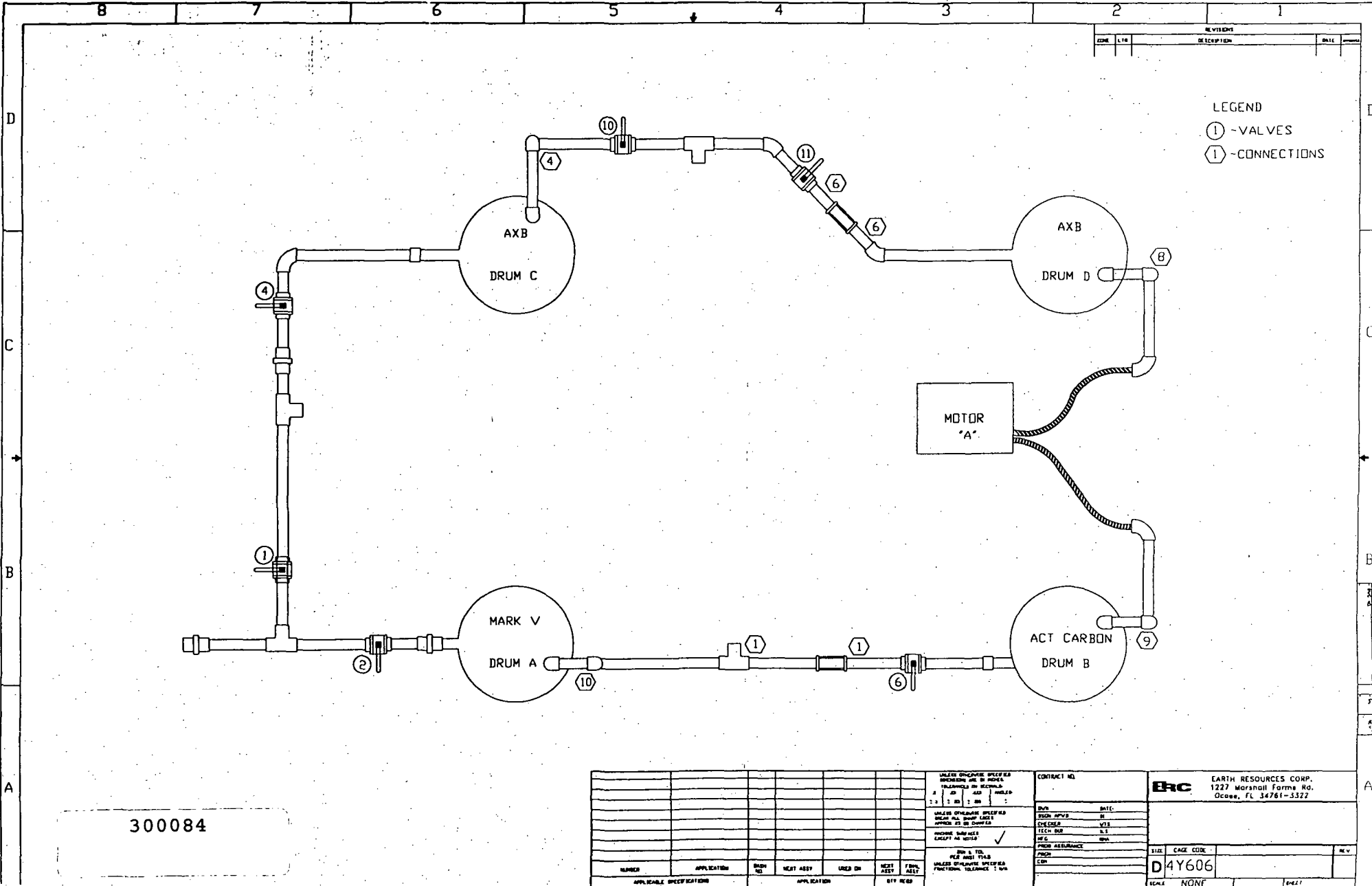
Ventilation	Local Exhaust	Recommended if dusting is excessive.	Special NONE
	Mechanical (General)	Required	Other NONE

Protective Gloves Rubber gloves recommended Eye Protection Face shield or goggles

Other Protective Clothing or Equipment  
Normal work clothing covering arms and legs should be worn.

Work Hygiene Practices  
Remove contaminated clothing and wash before reuse. Wash with soap and water before eating, drinking or using toilet facilities. Safety shower, eye bath and washing facilities should be available.

F.3.



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NUMBER	APPLICATION	DRUM NO.	HEAT ASSEY	USED ON	HEAT ASSEY	HEAT ASSEY	DATE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS IN DECIMALS 1/2 3/4 1 1 1/2 2 3 4 6 8 10 12 16 20 24 30 36 48 60 72 96	CONTRACT NO. DIVISION DATE DESIGN APPROVED BY CHECKED BY TECH. DESIGNED BY SUPERVISOR FIELD ASSURANCE
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS IN DECIMALS 1/2 3/4 1 1 1/2 2 3 4 6 8 10 12 16 20 24 30 36 48 60 72 96	EARTH RESOURCES CORP. 1227 MORNINGSTAR FORTS RD. OCLOEE, FL 34761-3522
TITLE: CAGE CODE: <b>D4Y606</b>	SCALE: NONE

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FINAL REPORT - PHASE II

EVOR PHILLIPS SITE  
SAYREVILLE, NJ  
JULY 1997

EPA Work Assignment No.: 2-249  
WESTON Work Order No.: 03347-142-001-2249-01  
EPA Contract No.: 68-C4-0022

Prepared by:

Roy F. Weston, Inc.

  
\_\_\_\_\_  
Raymond Lewis  
REAC Task Leader

7/3/97  
Date

Prepared for:

U.S. EPA/ERTC

Harry Compton  
Work Assignment Manager

  
\_\_\_\_\_  
Edward F. Gilardi  
REAC Program Manager

7/7/97  
Date

### 2.3 Weather Station

Meteorological monitoring was conducted using a portable 3-meter meteorological tower. The Coastal Climate Weatherpak was utilized to collect the data. Parameters such as wind speed, wind direction, ambient air temperature, relative humidity, and barometric pressure were recorded in 5-minute rolling averages every 30 seconds. Data was available in real-time via a radio link between the portable 3-meter meteorological tower, and a portable computer (pc) located in the command post. Data was recorded at the pc and at the portable 3-meter meteorological tower. The data collected was used to determine frequency of wind speed and direction for each day that air sampling or monitoring was conducted.

### 2.4 Air Dispersion Modeling

Air modeling was conducted to simulate the release of phosgene and chlorine at the site under the maximum credible event (MCE) scenario on a daily basis during excavation activities. The Areal Locations of Hazardous Atmospheres (ALOHA) model was used for the simulation. ALOHA estimates the emission rate, movement, and dispersion of gases released into the atmosphere. The model takes into account the toxicological and physical characteristics of the material being simulated. ALOHA also considers the physical characteristics of the site, the atmospheric conditions at the time of release, and the initial source conditions.

Release of chlorine and phosgene were simulated separately, both were assumed to be in a gaseous state and of a volume which would fill a 55 gallon drum located above ground. Atmospheric conditions simulated were obtained on a daily basis.

**SITE DATA INFORMATION:**

Location: SAYREVILLE, NEW JERSEY  
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)  
Time: April 17, 1997 1449 hours EDT (Using computer's clock)

**CHEMICAL INFORMATION:**

Chemical Name: PHOSGENE Molecular Weight: 98.92 kg/kmol  
TLV-TWA: 0.1 ppm IDLH: 2 ppm  
Footprint Level of Concern: 2 ppm  
Boiling Point: 45.61° F  
Vapor Pressure at Ambient Temperature: greater than 1 atm  
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

**ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)**

Wind: 5 mph from w at 3 meters  
No Inversion Height  
Stability Class: D Air Temperature: 55° F  
Relative Humidity: 80% Ground Roughness: Open country  
Cloud Cover: 10 tenths

**SOURCE STRENGTH INFORMATION:**

Leak from hole in horizontal cylindrical tank  
Tank Diameter: 1.77 feet Tank Length: 3 feet  
Tank Volume: 53.2 gallons Tank contains gas only  
Internal Temperature: 62° F  
Internal Press: 1.11 atmospheres  
Chemical Mass in Tank: 2.18 pounds  
Circular Opening Diameter: 3 inches  
Release Duration: 1 minute  
Max Computed Release Rate: 1.86 pounds/sec  
Max Average Sustained Release Rate: 0.00339 pounds/sec  
(averaged over a minute or more)  
Total Amount Released: 0.20 pounds

**FOOTPRINT INFORMATION:**

Model Run: Heavy Gas  
User-specified LOC: equals IDLH (2 ppm)  
Max Threat Zone for LOC: 128 yards

**TIME DEPENDENT INFORMATION:**

Concentration Estimates at the point:  
Downwind: 60 yards  
Off Centerline: 0 yards  
Max Concentration:

Outdoor: 8.63 ppm

Indoor: 0.0615 ppm

Note: Indoor graph is shown with a dotted line.



Time: April 17, 1997 1449 hours EDT (Using computer's clock)

Chemical Name: PHCSGENE

Wind: 5 mph from w at 3 meters

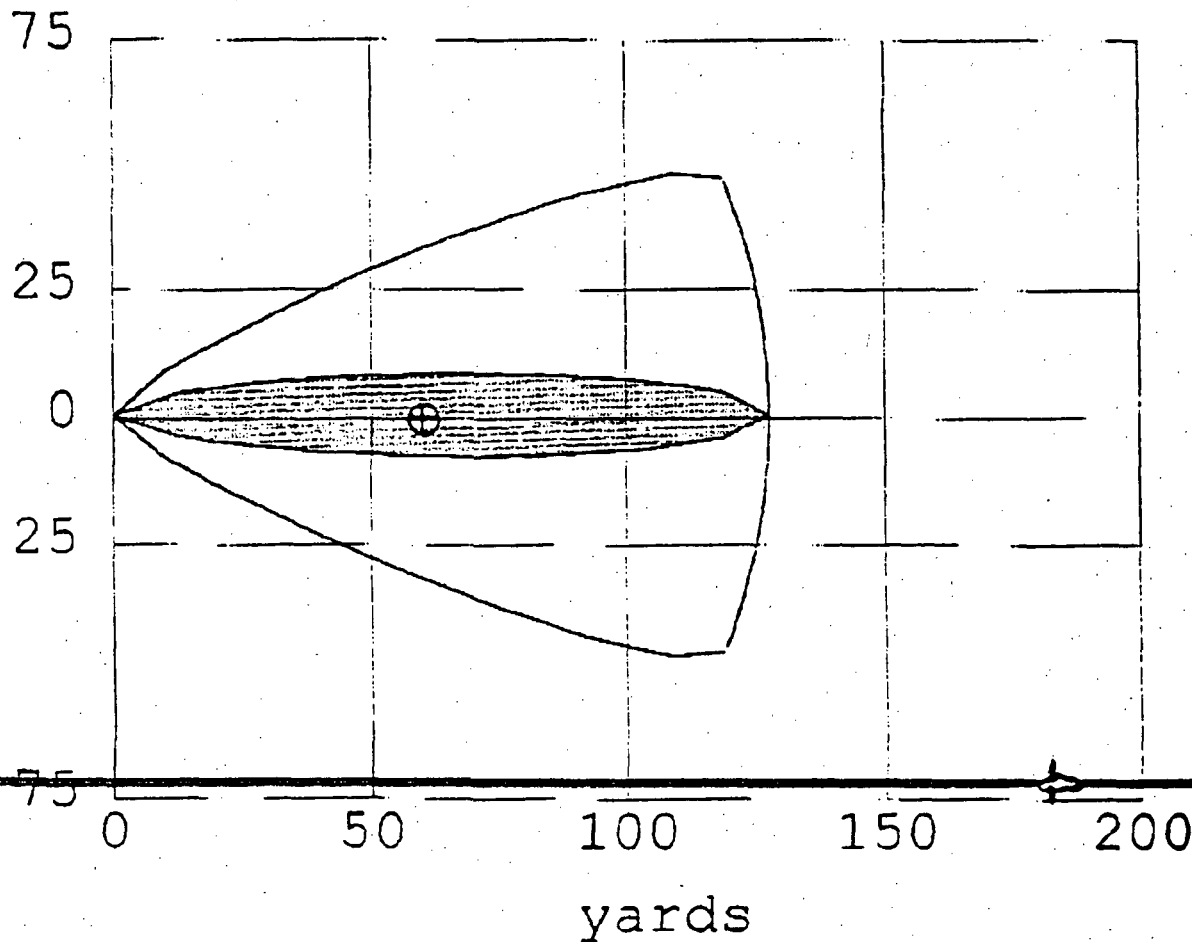
FOOTPRINT INFORMATION:

Model Run: Heavy Gas

User-specified LOC: equals IDLH (2 ppm)

Max Threat Zone for LOC: 128 yards

yards



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## 2.2 Air Monitoring

During excavation activities, REAC was tasked to perform air monitoring inside the containment structure and around the perimeter of the site. REAC used several different air monitoring instruments to sample for the numerous potential hazards. Inside the containment area, REAC personnel utilized the Photovac MicroTIP to monitor for VOCs; the Environmental Technologies Group (ETG) Chemical Agent Monitor (CAM) to monitor for nerve agents and mustard agents; the Biosystems Cannonball2 to monitor for oxygen ( $O_2$ ), combustible gas, hydrogen cyanide (HCN), and sulphur dioxide ( $SO_2$ ); and the Zellweger TDL tapemeter for monitoring chlorine ( $Cl_2$ ) and phosgene ( $COCl_2$ ). In addition to the REAC monitoring, the U.S. Army Technical Escort Unit (TEU) personnel continually drew samples from inside the containment area for mustard gas analysis using a MINICAM, located outside the structure during excavation activities.

REAC personnel also performed site perimeter air monitoring during excavation activities. The monitoring team utilized the Photovac MicroTIP to monitor for VOCs, the CAM to monitor for nerve agents and mustard agents, and the Biosystems PHD ULTRA to monitor for  $O_2$ , LEL, and  $Cl_2$ .

### 2.2.1 Photovac - MicroTIP

The MicroTIP is a photo ionization detector (PID). It measures the concentration of airborne ionizable gases and vapors and automatically displays and records these concentrations. The reading displayed represents the total concentration of all ionizable chemicals present in the sample. The MicroTIP will detect all ionizable compounds with ionization potentials of 10.6 eV or less. The target list consists of VOCs.

A gas stream is drawn into the MicroTIP via an internal pump. An ultraviolet lamp generates photons which ionize specific molecules in the gas stream. The ionized molecules produce an electronic signal which is processed by the microprocessor. The result is then displayed on the liquid crystal display (LCD).

### 2.2.2 ETG - Chemical Agent Monitor (CAM)

The CAM is a portable, hand-held instrument designed to detect a hazard from nerve and mustard agent vapor present in the air. The CAM has two operating modes, G and H. In the G mode, the CAM monitors for nerve agents. In the H mode, the CAM monitors for mustard agents. There are numerous cross-sensitive compounds which give false responses on the CAM. Cleaning compounds, disinfectants, perfumes, food flavorings, peppermint, cough lozenges, menthol, and smoke are some of the compounds that will cause false readings.

### 2.2.3 Zellweger Analytical - TDL Tapemeter

The TDL combines a chemcassette detection system and microprocessor control to achieve optimum detection speed, accuracy, and specificity. It responds quickly to specific hazardous gases and vapors. The TDL was used on this project to detect chlorine and phosgene during excavation activities.

Monitoring occurs when a stream of air is pumped across the chemcassette tape. The chemically treated tape reacts with the specific gas that is being sampled for. A color change occurs on the tape and is analyzed by the microprocessing unit. The amount of color change is processed into a concentration which is displayed on the instrument readout. The process takes 15 seconds for chlorine and 30 seconds for phosgene.

#### 2.2.4 Biosystems CANNONBALL2

The CANNONBALL2 is a portable, hand-held microprocessor controlled instrument designed for monitoring up to four atmospheric gas hazards simultaneously. The instrument can measure oxygen, combustible gas, and up to two toxic gases. The choice of toxic gases are: hydrogen sulfide ( $H_2S$ ), hydrogen cyanide (HCN), carbon monoxide (CO), nitric oxide (NO), nitrogen dioxide ( $NO_2$ ), and sulfur dioxide ( $SO_2$ ). These instruments are designed to monitor for OSHA permissible exposure levels (PEL) with the estimated detection limit being 1 part per million (ppm). These units are active monitors with data logging capabilities.

#### 2.2.5 Biosystems PHD ULTRA

The PHD ULTRA is a portable, hand-held microprocessor controlled instrument designed for monitoring up to four atmospheric gas hazards simultaneously. The instrument can measure oxygen, combustible gas, and up to two toxic gases. The choice of toxic gases are:  $H_2S$ , HCN, CO, NO,  $NO_2$ ,  $SO_2$ , chlorine ( $Cl_2$ ), and ammonia ( $NH_3$ ). These instruments are designed to monitor for OSHA PEL levels with an estimated detection limit of 1 ppm. These units are passive or active monitors with data logging capabilities.

# Chemical Agent Monitor (CAM)

CAM is in production at Environmental Technologies Group, Inc. (ETG) under license from Graseby Ionics Ltd. Over 10,000 units will be delivered to U.S. forces by June 1994. Highly responsive to agents and extremely tolerant of interferences, CAM is designed to identify the presence of agent vapor and residue during decontamination operations by personnel in full Mission Oriented Protective Posture (MOPP IV). CAM requires no chemicals and provides instrument display agent readout. Remote indication, or audible alarm capability is possible via the use of the rear port connector and headphones. CAM operates by two pushbuttons: ON/OFF and MODE CHANGE for the selection of either nerve or blister agent detection. Power options include a primary 6V battery or external power. A carrying case contains a spare battery, simulant test kit, stand-off collars, and a carrying strap for operator ease.

## SPECIFICATIONS

### Detection and Sensitivity

CAM detects nerve and blister agents in accordance with established NATO requirements.

Additional programming for new agent threats, is possible to extend the range of detection to cover certain Riot Control Agents, and (harmless) chemical simulants used as training aids.

### Power Supply

Single 6V primary battery (sealed LiSO<sub>2</sub> system)

### Battery Life

Minimum 12 hours continuous

Typical 10 hours normal use at 20° C

### Environment

DEF STAN 00-1 Cat. A2 to C1

### Temperature Range

-30°C to +55°C operating (-55°C to +70°C storage)

### Durability

DEF STAN 07-55

### Dimensions

38 cm longest dimension

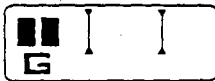
### Weight

Hand Unit 1.8 kg

## Easy-to-Read CAM Display



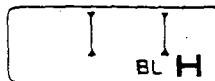
Nerve Agent Mode (G) selected  
Instrument in warm-up phase



Nerve Agent Mode (G) selected  
Relatively low concentration indicated (2 blocks visible)



Blister Agent Mode (H) selected  
Relatively high concentration indicated (7 blocks visible)

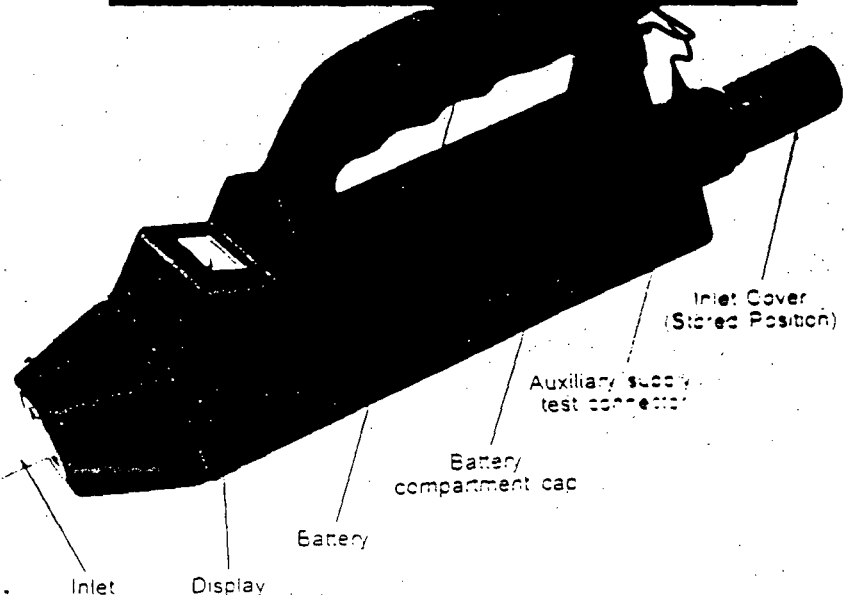
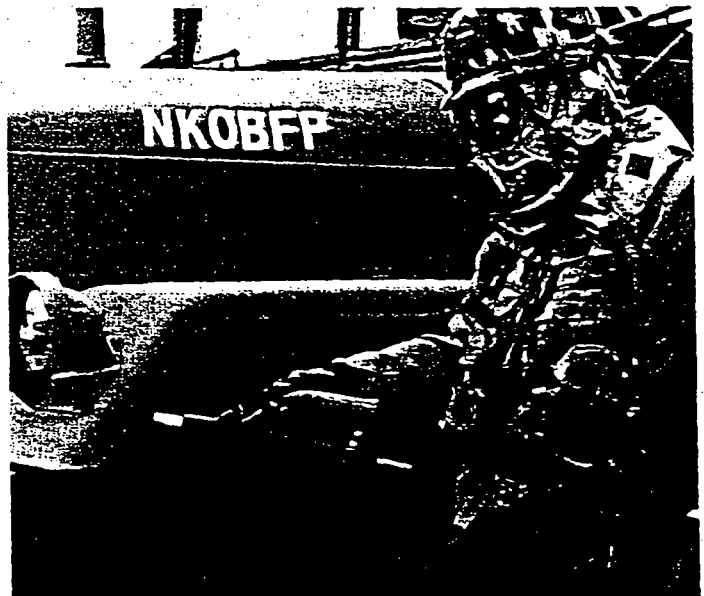


Battery Low Indication (BL)

NSN 6665-01-199-4153

## CAM FEATURES

- Small, lightweight, one hand operation
- High sensitivity to nerve and blister agents
- Low sensitivity to interferences
- Easy to read display
- Easily decontaminated
- Fast response and clear-down times
- Two simple pushbutton controls
- Operates on batteries or external power
- Audible Alarm available via rear port and headphones
- Can be reprogrammed to detect new agent threats
- Diagnostic output via rear port



Environmental Technologies Group, Inc.

1400 Taylor Avenue, P.O. Box 9840

Baltimore, MD 21284-9840

Telephone (410) 339-3112 / 321-5200

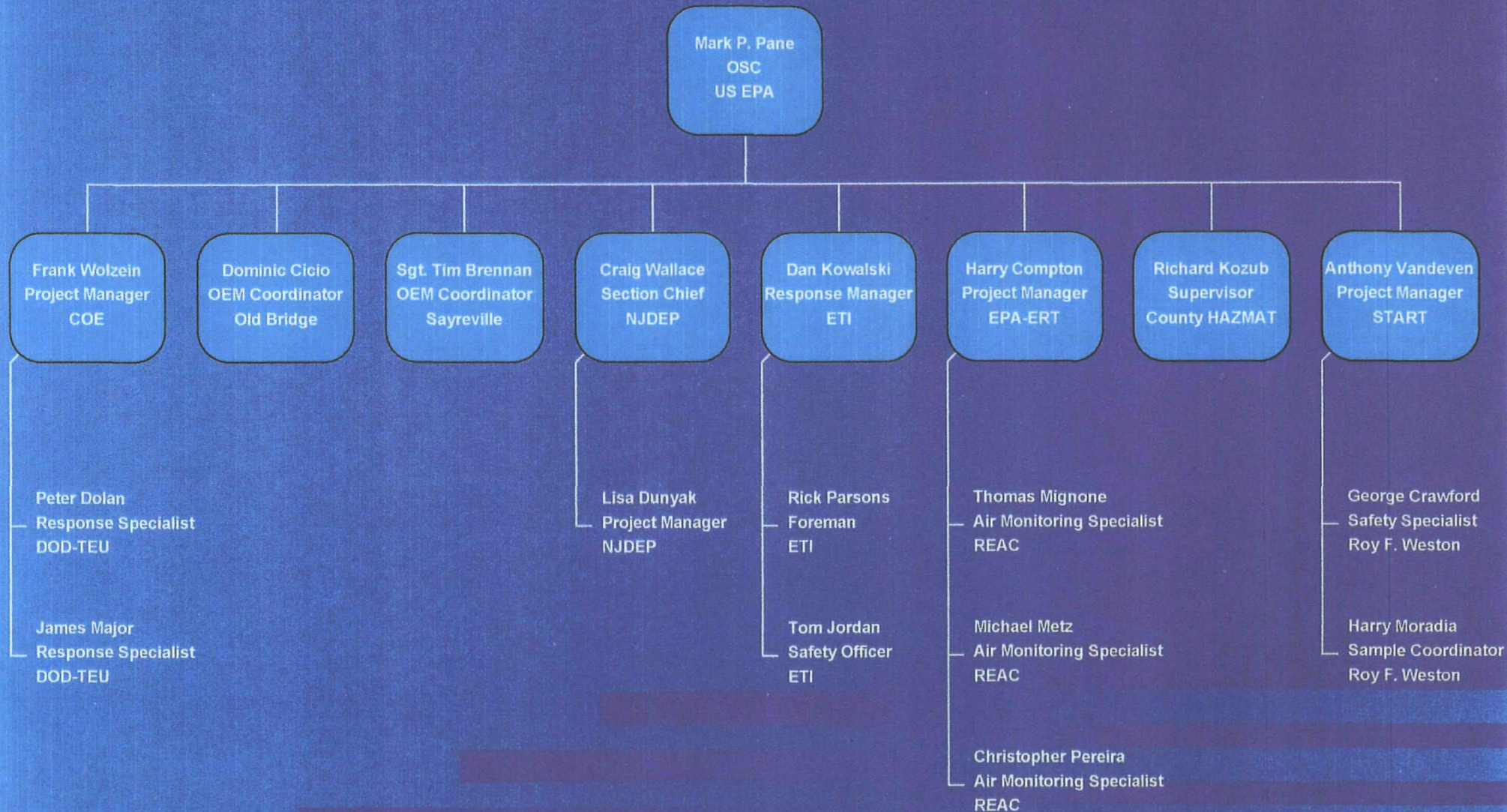
FAX (410) 321-5255

300093





# ORGANIZATION OF RESPONSE EVOR PHILLIPS SITE



300095

## TELEPHONE LOG

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<b>Greg Wallace</b>	<b>NJDEP</b>	<b>609-984-3727</b>
<b>Lisa Dunyak</b>	<b>NJDEP</b>	<b>609-292-2009</b>
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George Nicholas	NJDEP	609-292-8427
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	Aberdeen Proving Grounds, MD 21010-5423	
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Anita Brown	EPA-PSB	212-637-4350

<b>Dan Kowalski</b>	<b>ETI</b>	<b>717-963-1413</b> 1-800 SKY-Page 220-8210
Kathleen Burden	ETI	804-358-5858 804-358-0300
Dr. Robert Wyman	ER Dr.	908-324-5104
Lisa Kaul	JM	217-398-4017
Frank Opet	JM	609-384-7222
Monica Borland	SciTech	410-671-7104 410-676-2304 Fax
<b>Sgt. Tim Brennan</b>	<b>Sayreville OEM</b>	<b>908-727-4444</b>
Richard Diaz	Old Bridge Fire	908-679-4320
Nelson Igleases	Old Bridge Engineer	908-721-5600 x2330
Britt Schulmeister	Old Bridge Fire Dept.	908-727-2511
Alayne Shipler	Old Bridge	908-721-5600 x 5600 908-607-7900 Fax
<b>Dominic Cicio</b>	<b>Old Bridge OEM</b>	<b>908-721-5600 x 7919</b> 212-437-1892 212-437-1968 (Fax)
Ernie Schitz	Old Bridge Env. Com.	908- 560-2042 908-560-2371
Mary	Old Bridge Transportation	908-525-5277
<b>Richard Kozub</b>	<b>Middlesex County HAZMAT</b>	<b>908-727-6622</b>
Tracy Robinson	Suburban	908-254-7000
Lilo Stainton	Home News	908-246-5500 x7219
Heather McGregor	Home News	908-246-5500 x7260
Neal Solonoz	WCTC 1450 AM	908-249-2600 x244



## DRUM COMPARISON, EVOR PHILLIPS

## VOA'S

PRP DRUMS (SAMPLE # 1-19, 29-34)

SOIL IN THE TWO ROLLOFFS (SAMPLE # 20-28)

EPA DRUMS (SAMPLE  
# 36-47)EPA POSTEX  
(SAMPLE  
#47-59)

Chloromethane				
Bromomethane				
Vinyl Chloride	04, 08,			
Chloroethane				
Methylene Chloride	13, 16, 11, 34, 01, 02, 03, 04, 05, 06, 07, 08, 12, 17, 18, 19, 10	20, 22, TB-2,		
Acetone	02, 16, 29, 30, 31, 32, 34, 01, 12,	20, 21, 23, 24, 25, 26, 28, 27, 22, 43, 44, TB-1, RB-1, 39	37,	53,
Carbon Disulfide	14, 17,			
1,1-Dichloroethene				
1,1-Dichloroethane				
1,2-Dichloroethene (total)				
Chloroform	01,			
1,2-Dichloroethane	02, 16, 11, 29, 30, 31, 34, 01, 04, 05, 06, 07, 08, 12, 18, 19, 10	20, 21, 23, 24, 25, 26, 28, 27, 22	37,	
2-Butanone	13, 29, 30, 31, 34, 01, 04, 05, 08, 12, 10	23, 24, 25, 26, 28, 27, 22, 43, 44, 39,	37,	47, 48, 50, 51, 52
1,1,1-Trichloroethane				
Carbon Tetrachloride				
Bromodichloromethane				
1,2-Dichloropropane	34,			
cis-1,3-Dichloropropene				
Trichloroethene	11, 30, 18,	21, 25, 22		
Dibromochloromethane				
1,1,2-Trichloroethane				
Benzene		22,		
trans-1,3-Dichloropropene				
Bromoform				
4-Methyl-2-Pentanone	29, 30, 31, 32, 34, 04, 05, 08, 19, 10	23, 25, 26, 28, 27, 22	37, 43, 44, 39,	
2-Hexanone		27,	43, 44, 39	
Tetrachloroethene				
1,1,2,2-Tetrachloroethane	13,			
Toluene	13, 16, 11, 29, 30, 32, 33, 36, 01, 04, 05, 08, 18,	20, 21, 23, 24, 25, 28, 22	41, 46, 37, 40, 43, 44, 39	54, 57
Chlorobenzene				
Ethylbenzene	32,	24, 25, 28, 27	40, 43, 44,	
Styrene	29, 30, 32, 18	22,		
Total Xylenes	13,	20, 23, 24, 25, 26, 28, 27, 22	46, 37, 40, 43, 44,	54,

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## DRUM COMPARISON, EVOR PHILLIPS

### BNA's

PRP DRUMS (SAMPLE # 1-19, 29-34)

SOIL IN THE TWO  
ROLLOFFS (SAMPLE #  
20-28)EPA DRUMS  
(SAMPLE #  
36-47)EPA POSTEX  
(SAMPLE #47-59)

Phenol	11, 01, 07, 12, 17,	21, 22, 23, 25, 24,		
bis(2-Chloroethyl)ether				
2-Chlorophenol				
1,3-Dichlorobenzene				
1,4-Dichlorobenzene				
1,2-Dichlorobenzene				
2-Methylphenol				
2,2'-oxybis(1-Chloropropane)				
4-Methylphenol				
N-Nitroso-di-n-propylamine				
Hexachloroethane				
Nitrobenzene				
Isophorone	32,			
2-Nitrophenol				
2,4-Dimethylphenol				
bis(2-Chloroethoxy)methane				
2,4-Dichlorophenol				
1,2,4-Trichlorobenzene				
Naphthalene	06, 32,		46,	49, 56, 58, 59,
4-Chloroaniline				
Hexachlorobutadiene			42, 46,	54, 56, 58,
4-Chloro-3-methylphenol				
2-Methylnaphthalene	11, 30, 32,	28,	45, 46,	49, 56
Hexachlorocyclopentadiene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenol				
2-Chloronaphthalene				
2-Nitroaniline				
Dimethylphthalate	31, 07,			
Acenaphthylene			46,	
2,6-Dinitrotoluene				
3-Nitroaniline				
Acenaphthene				56,
2,4-Dinitrophenol				
4-Nitrophenol				
Dibenzofuran				
2,4-Dinitrotoluene				
Diethylphthalate	31, 07, 08, 32,			49,
4-Chlorophenyl-phenylether				
Fluorene	11,		46,	54,
4-Nitroaniline				
4,6-Dinitro-2-methylphenol				
N-Nitrosodiphenylamine				
4-Bromophenyl-phenylether				
Hexachlorobenzene				
Pentachlorophenol				
Phenanthrene	10, 11, 30, 32,		46,	49, 59
Anthracene	11,	21	46,	49,
Carbazole				
Di-n-butylphthalate	07, 32, 34,	43, 44,	37, 38,	
Fluoranthene	10, 11, 30, 31,		46,	49, 55, 59
Pyrene	10, 30, 31, 32,		42, 46,	49, 55, 56, 58, 59,
Butylbenzylphthalate	09	92,	RB-01,	58, 59,
3,3-Dichlorobenzidine				
Benzo(a)anthracene	31,			56,
Chrysene	10, 11, 30, 31,		46,	49, 56,
bis(2-Ethylhexyl)phthalate	16, 10, 11, 30, 31, 07,	20, 21, 23, 25, 26, 28, 27,	36, 42, 45, 46,	58, 59,
Di-n-octylphthalate				
Benzo(b)fluoranthene	10, 11, 30, 31,		46,	49, 56,
Benzo(k)fluoranthene			46,	56,
Benzo(a)pyrene	11,		46,	49, 56,
Indeno(1,2,3-cd)pyrene	31,		46,	56,
Dibenz(a,h)anthracene			46,	
Benzo(g,h,i)perylene	06,		46, 39,	49, 56,

# DRUM COMPARISON, EVOR PHILL

**Pest/PCBs**     
 PRP DRUMS  
 (SAMPLE # 1-19,  
 29-34)     
 SOIL IN  
 THE TWO  
 ROLLOFFS (SAMPLE #  
 (SAMPLE # 20-28)     
 EPA  
 DRUMS  
 (SAMPLE # 36-47)     
 EPA  
 POSTEX  
 (SAMPLE  
 #47-59)

alpha-BHC				
beta-BHC	15,			56,
delta-BHC	06, 07,			
gamma-BHC (Lindane)		27,		
Heptachlor	15,			
Aldrin		25,		
Heptachlor Epoxide				
Endosulfan I			37,	
Dieldrin	07,	25,	37,	
4,4'-DDE				
Endrin		25,		
Endosulfan II				
4,4'-DDD	07, 16,			
Endosulfan Sulfate	06, 07,			
4,4'-DDT	15, 16,	25,		58,
Methoxychlor				
Endrin Ketone				
Endrin Aldehyde	20,	25,		
alpha-Chlordane				
gamma-Chlordane	30,		42,	59,
Toxaphene				
Aroclor-1016				
Aroclor-1221				
Aroclor-1232				
Aroclor-1242				
Aroclor-1248				
Aroclor-1254				
Aroclor-1260				



# DRUM COMPARISON, EVOR PHILLIPS

Metals/ N	PRP DRUMS (SAMPLE # 1-19, 29-34)	SOIL IN THE TWO ROLLOFFS (SAMPLE # 20-28)	EPA DRUMS (SAMPLE # 36-47)	EPA POSTEX (SAMPLE #47-59)
Aluminum	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44	
Antimony	02, 03, 05, 07, 08, 10, 11, 12, 13, 14, 15, 16, 17, 29, 30, 31, 32, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 40, 41, 42	
Arsenic	02, 03, 06, 07, 08, 10, 11, 13, 14, 15, 16, 17, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 25, 26, 27, 28	36, 37, 40, 41, 42, 46	47, 48, 49, 51, 54, 55, 56, 57, 59
Barium	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Beryllium	02, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 45, 46	47, 48, 49, 50, 51, 52, 54, 55, 56, 57, 58, 59
Cadmium	06, 07, 11, 15, 16, 30, 32	20, 22, 23, 25, 26, 27, 28	36, 37, 42, 46	49, 52, 56, 57, 59
Calcium	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Chromium	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Cobalt	02, 07, 10, 11, 13, 15, 16, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 40, 42, 46	49, 51, 54, 56, 57, 59
Copper	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Iron	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Lead	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Magnesium	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Manganese	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Mercury	02, 07, 10, 11, 16, 18, 27, 29, 30, 31, 32	20, 21, 22, 23, 25, 26, 27	37, 42	49
Nickel	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Potassium	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Selenium	02, 03, 04, 05, 07, 08, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 31, 32	22, 23, 24, 26, 28	37, 38, 40, 41, 42, 45	47, 48, 49, 50, 51, 56, 57, 58, 59
Silver	02, 06, 07, 09, 10, 11, 12, 13, 15, 16, 18, 19, 30, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 40, 41, 42, 45, 46	47, 48, 49, 50, 51, 54, 55, 56, 57, 58, 59
Sodium	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Thallium				
Vanadium	02, 06, 08, 07, 08, 10, 11, 13, 15, 16, 18, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 40, 41, 42, 45, 46	47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59
Zinc	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 30, 31, 32, 33, 34	20, 21, 22, 23, 24, 25, 26, 27, 28	36, 37, 38, 39, 40, 41, 42, 43, 44	
Zvanide	11	20, 21		

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# Middlesex

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7, 1997

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The Star-Ledger

## Poison gas sought at Superfund site

### Worker recalls seeing drums from military

By Tom Haydon  
STAR-LEDGER STAFF

Recollections of a backhoe operator have sparked a search for poisonous gas containers that may be buried on an Old Bridge Superfund site.

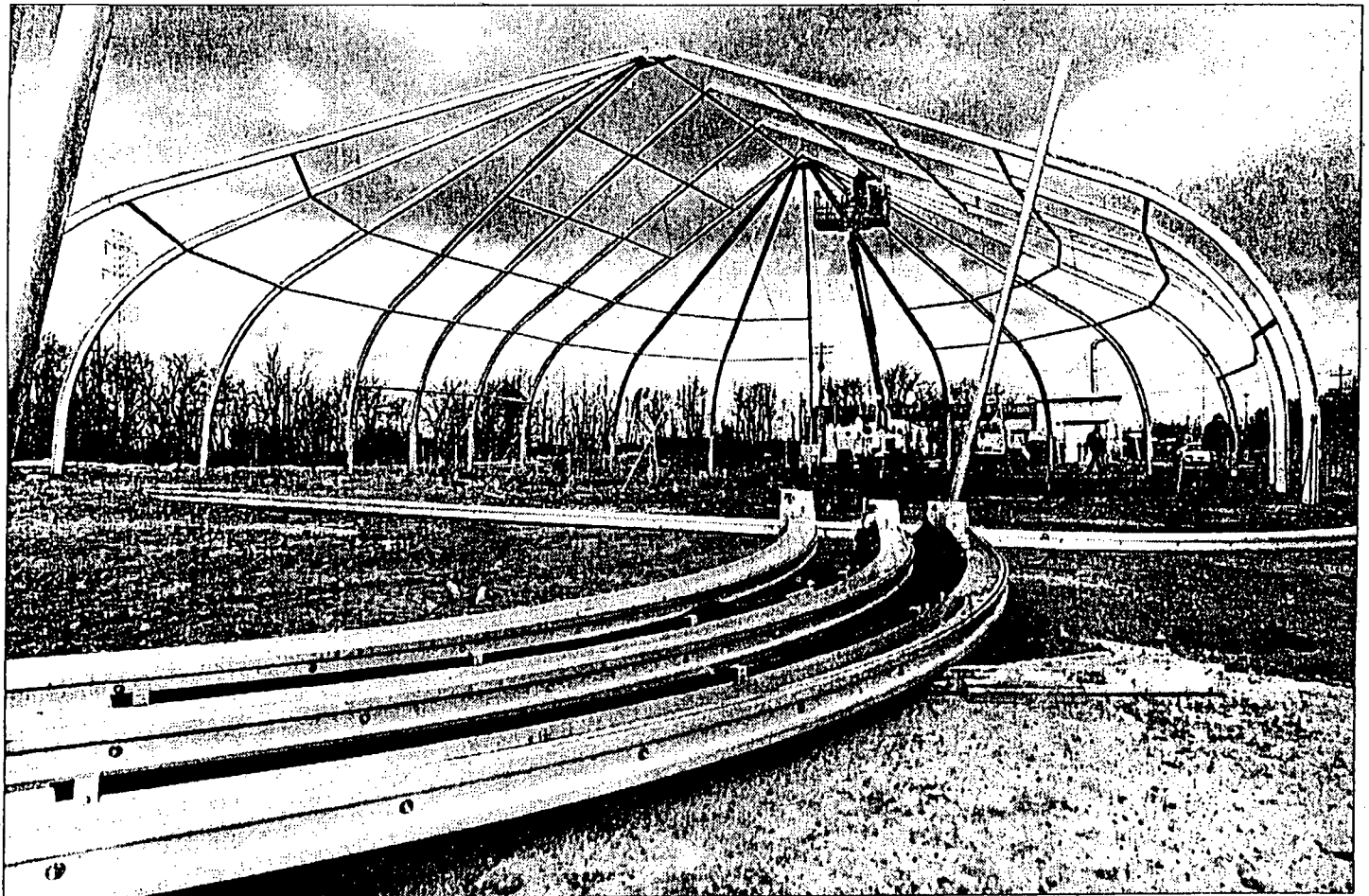
Reports of the efforts to locate military gas cylinders in the Evor Phillips site caused officials in both Old Bridge and neighboring Sayreville to quickly call for heightened security measures.

"I was shocked," Old Bridge Mayor Barbara Cannon said of learning about the search for the gas. "We're looking at every contingency."

State officials were informed a year ago that drums containing poisonous gas may be buried on the site.

"In March of 1996 we learned that two confidential informants told the (state) Criminal Justice Division that drums marked as having poisonous gas were buried at the site," Amy Collins, spokeswoman the state Department of Environmental Protection, said yesterday.

The agency, which has been in  
PLEASE SEE GAS, PAGE 38



Aluminum stanchions are ready to be erected as part of a containment structure at the Evor Phillips Superfund site in Old Bridge.

PHOTO BY MATT RAINEY

300104

## Gas

CONTINUED FROM PAGE 35

### Worker recalls military drums

charge of cleanup operations at the site for several years, attempted to have the companies responsible for polluting the property investigate the reports of the drums, she said.

Last October, after deciding it lacks the resources to handle the cleanup, the DEP notified the federal Environmental Protection Agency, Collins said.

In January, the federal agency agreed to begin an emergency cleanup.

Richard Cahill, spokesman for the federal agency, said a worker who operated a backhoe on the property for years told state officials that he recalled seeing containers bearing Department of Defense markings.

"He remembers he saw cylinders. This guy has proved right in other information he had about drums being buried on the site," Cahill said.

Acting on the worker's recollection, the state conducted tests and determined metal objects were buried in a quarter-acre section of the tract.

This finding led authorities to suspect the poisonous gas, possibly military mustard gas, could be buried on the site and that an emergency cleanup was necessary to remove waste posing a potential threat to public health.

Cahill said information about the cylinders is "sketchy" and the underground metal objects "could turn out to be an old car."

"It could turn out to be a bike. Sometimes we take emergency action and we get criticized for being overly cautious. We've taken these precautions to ensure the public health and safety," he said.

Cannon and Sayreville Mayor James Zagata also want to ensure public safety. They sent a list of demands to federal authorities calling for construction of a fence around the site and reimbursement for any costs the towns might incur.

Cannon said police, fire departments and first aid squads may get involved. The property is in an indus-

trial area of Old Bridge, but close to a residential neighborhood in Sayreville, the mayor noted.

Cahill said security officers will be at the site around-the-clock during the excavation and search for the cylinders. A team from the federal Department of Defense will also be on the scene, he said.

Workers were erecting a storage tent at the site yesterday that will hold four mobile air filtration systems with hoses to be used "in the unlikely occurrence of a release," Cahill said.

Any gas containers found on the site, he said, will be removed by the Defense Department crew. Digging is

to begin next week, but it is uncertain when the work will be completed.

Once that project is completed, the state will begin work to clean up the entire site. The agency will demolish buildings on the property, remove drums stored around the structures and pump out groundwater for treatment.

In the 1970s, a hazardous waste treatment plant operated at the site, but that operation ended in the early 1980s. The tract was designated a Superfund site in 1983. Agents from the state Department of Environmental Protection have worked at the site for more than eight years.

## Probe

CONTINUED FROM PAGE 35

use of county vehicles during off-shift hours," Pozycki said. The Star-Ledger has reported that Spicuzzo's K-9 sergeant used his county car to deliver fast-food chicken to the sheriff's doorstep in New Brunswick.

In response to the newspaper's allegations that political contributions

were raised within the department, Pozycki proposed an amendment to the county ethics ordinance banning sheriff's officers from soliciting or receiving campaign contributions on county property.

"Although the courts have upheld the permissibility of a county sheriff to hold party office, when such a situation exists there need to be a higher degree of assurance given to the public that politics and police work be kept separate," Pozycki said.

## LOCAL REPORT

# EPA prepares for the worst

By **SCOTT GOLDSTEIN**  
STAFF WRITER

Government officials last night said they will be prepared to find the worst kind of military waste — perhaps deadly gases intended for use in World War I — when they excavate an abandoned waste-disposal site in

## SAYREVILLE

Old Bridge near the Sayreville border.

"I don't want people walking out of here thinking we have blistering agents or nerve gas at this site, but there is that possibility out there," said Dick Salkic of the federal Environmental Protection Agency.

That's why the EPA is constructing a high-tech dome and bringing in technology to contain any poisonous gases that could be released during the excavation, set to begin March 17.

An emergency management plan also calls for the installation of an air-horn alarm and the collection of the names and telephone numbers of residents who live within 1,000 feet of the project in case of a need to

evacuate, officials said.

"The worst thing is we're going to scare the life out of you with all the precautions," Salkic said during a public information meeting at Sayreville's Borough Hall. "We might just pull a refrigerator out of the ground."

Thanks to ground-penetrating radar, the EPA has confirmed there are three items about 8 feet underground; the next step is to determine exactly what they are.

The EPA recently was alerted that drums of military waste may have been buried in a 100-by-100-foot area at the abandoned Evor Phillips site, 5.8 acres located near Bordentown Avenue.

A tip about the buried drums came from a backhoe operator who worked at the disposal site in the 1970s. The worker said he was asked to bury drums he believed contained contaminated military waste.

"We took samples of the soil around the (items) and they came back negative," said Mark Pane, project manager for the EPA. "So either nothing was released and it is contained or nothing (toxic) is down

there."

A 36-foot-high protective dome made up of a plastic-type fabric will form a protective covering, according to Pane. "It will look like a big white tent," he said.

Inside, there will be devices called "air handlers" that will treat air if gases are released, so it won't enter the atmosphere and surrounding neighborhoods, Pane said.

Investigators will dig with their hands as they get close, to insure any drums will not be punctured, Pane said.

Work will be conducted between 7 a.m. and 5:30 p.m. weekdays, and the site will be patrolled by security during off hours, he added.

The state DEP already has removed at least 60 hazardous waste drums and hundreds of drum parts since 1983, when the site was placed on the national priorities list of Superfund sites, DEP spokeswoman Loretta O'Donnell said. Most of the dumping was in the 1970s when Evor Phillips Leasing Co. owned the site between Bordentown Avenue and Waterworks Road.

# Found substances are unidentified

Cleanup at Evor Phillips site nearly complete, as are tests of old containers

BY TRACY ROBINSON

Staff Writer

OLD BRIDGE — Analysis results from the Evor Phillips Superfund site are in, revealing what materials were buried at the site.

The 5.8-acre site near the Bordentown Avenue S-curve has been on the state Department of Environmental Protection's (DEP) list of cleanup sites since 1983 and has already been rid of hundreds of waste

containers. Then in the spring, an informant reported that cylinders labeled "poisonous gas, U.S. Military" were present at the site.

Although a press release issued in April by Congressman Frank Pallone Jr. (D-6th) said that no poisonous gases were found, recent test results show volatile organic compounds, such as solvents, were in the excavated containers.

According to Scene Coordinator Mark Pane of the Environmental Protection Agency (EPA), it is not known exactly what the substances were or what they were used for.

Some typical organic compounds are solvents, degreasers, paint thinners and

fuels. Heather Schwartz of the DEP said.

Analysis of the material was done by Accredited Laboratories of Carteret.

In the spring, a dome was constructed around the area in case hazardous material was unearthed.

This area "supposedly had cylinders of Department of Defense waste that the PRPs (potentially responsible parties) were not prepared to address," Pane said.

Approximately 34 drums and 300 lab bottles have been removed from the site with this project.

These recently removed containers had no information or any identifying marks because they were buried for so long, Pane said.

Although a number of PRPs have been identified, Pane said it is uncertain which company or companies buried the waste there. Over time, the land has been used for many purposes, including silver recovery, water treatment and fiberglass manufacturing, he said.

Pane said the EPA's portion of the project is finished.

The cost of removal for this part of the

cleanup, which is a federally funded project, is \$335,000 to date, according to Pane.

Yet, the DEP continues work excavating other containers found outside the area of the dome.

"I believe they are going to continue investigating the soil for drums," he said.

The DEP now has to get a ground-water remediation system installed and operational. This system will extract ground water from a down-gradient location and pipe it to a treatment unit where it gets injected into the ground, Pane said.

"Basically, it's a flushing-out system," he said.

Approximately 370 tons of contaminated soil containing hazardous constituents was also taken from the site and shipped to a landfill in Pennsylvania on Aug. 8, according to Pane.

Since cleanup originally began, many partial pieces of empty waste containers have been recovered.

"We've taken out about 1,000 of what we call carcasses," Craig Wallace of the DEP said.

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## PROCUREMENT REQUEST LOG

1.	January 14, 1997	\$107,386	HE-0013 <sup>1</sup>
2.	April 18, 1997	\$142,614	HE-0013
3.	April 18, 1997	\$ 25,000	HE-0050 <sup>2</sup>
4.	April 22, 1997	\$235,000	HE-0051
5.	April 6, 1998	(\$58,916)	HE-0051 <sup>3</sup>

**TOTAL** **\$451,084**

### NOTES:

1. The Original Procurement Request was for \$250,000. However, the amount was inadvertently changed to \$107,386 which is the subtotal, not the grand total, amount listed in item 17(H) of the Order for Supplies or Services, Form 347. This error was not discovered until April, 1997. The subsequent Procurement Request, in the amount of \$142,614, was created to rectify the earlier error and bring the obligated total to \$250,000.
2. This Procurement Request was an advance of the \$260,000 approved under the Action Memorandum signed by the RA on April 11, 1997.
3. This Procurement Request was processed after the Removal Action was completed to reduce the amount of un-used funds and apply them to other active projects.



# EVOR PHILLIPS SITE

## REMOVAL ACTION

HISTORY OF REMOVAL ACTION CEILINGS					
	JAN 13, 1997	March 23, 1997	April 18, 1997	April 22, 1997	April 6, 1998
ERCS	\$250,000	\$250,000	\$275,000	\$510,000	\$451,084
START	\$30,000	\$30,000	\$30,000	\$85,000	\$85,000
REAC	\$0	\$20,000	\$20,000	\$70,000	\$70,000
EPA	\$50,000	\$25,000	\$25,000	\$60,000	\$60,000
COE/DOD	\$0	\$25,000	\$25,000	\$95,000	\$95,000
CONT	\$20,000	\$0	\$0	\$92,000	\$92,000
TOTAL	\$350,000	\$350,000	\$375,000	\$912,000	\$853,084

# EVOR PHILLIPS SITE

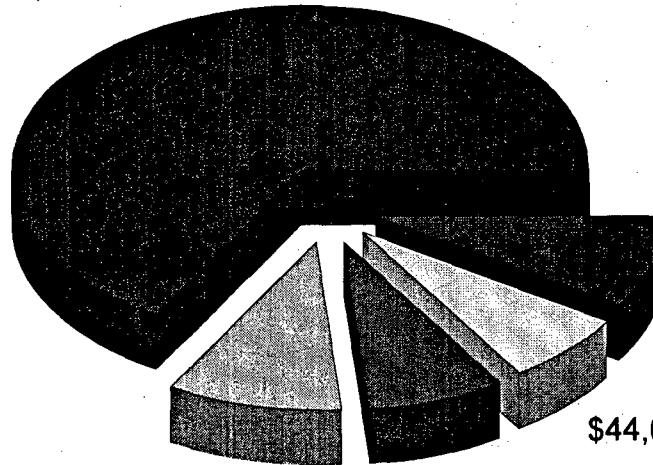
## REMOVAL ACTION

FINAL COST SUMMARY			
	FINAL CEILING AMOUNTS	ACTUAL FINAL COSTS	BALANCE OF FUNDS
ERCS	\$451,084	\$425,583	\$25,501
START	\$85,000	\$63,000	\$22,000
REAC	\$70,000	\$49,000	\$21,000
EPA	\$60,000	\$57,500	\$2,500
COE/DOD	\$95,000	\$44,000	\$51,000
CONT	\$92,000	\$0	\$92,000
TOTAL	\$853,084	\$639,083	\$214,001

# TOTAL SITE COSTS

EVOR PHILLIPS SITE

\$425,583 (66.6%) ERCS



\$57,500 (9.0%) EPA

\$44,000 (6.9%) DOD/COE

\$63,000 (9.9%) START

\$49,000 (7.7%) REAC

TOTAL SITE COSTS = \$639,083

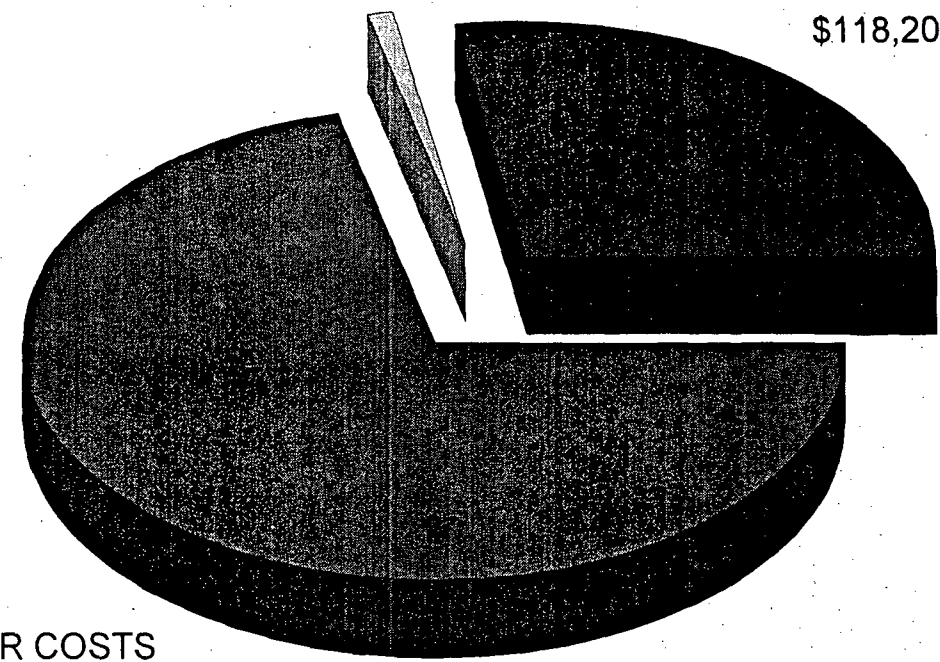
L.4.e.

# ERCS COSTS

EVOR PHILLIPS SITE

\$4,263 (1.0%) ERCS EQUIPMENT

\$118,208 (27.8%) PERSONNEL



\$303,112 (71.2%) OTHER COSTS

TOTAL ERCS COSTS = \$425,583

300113

L.4.b.

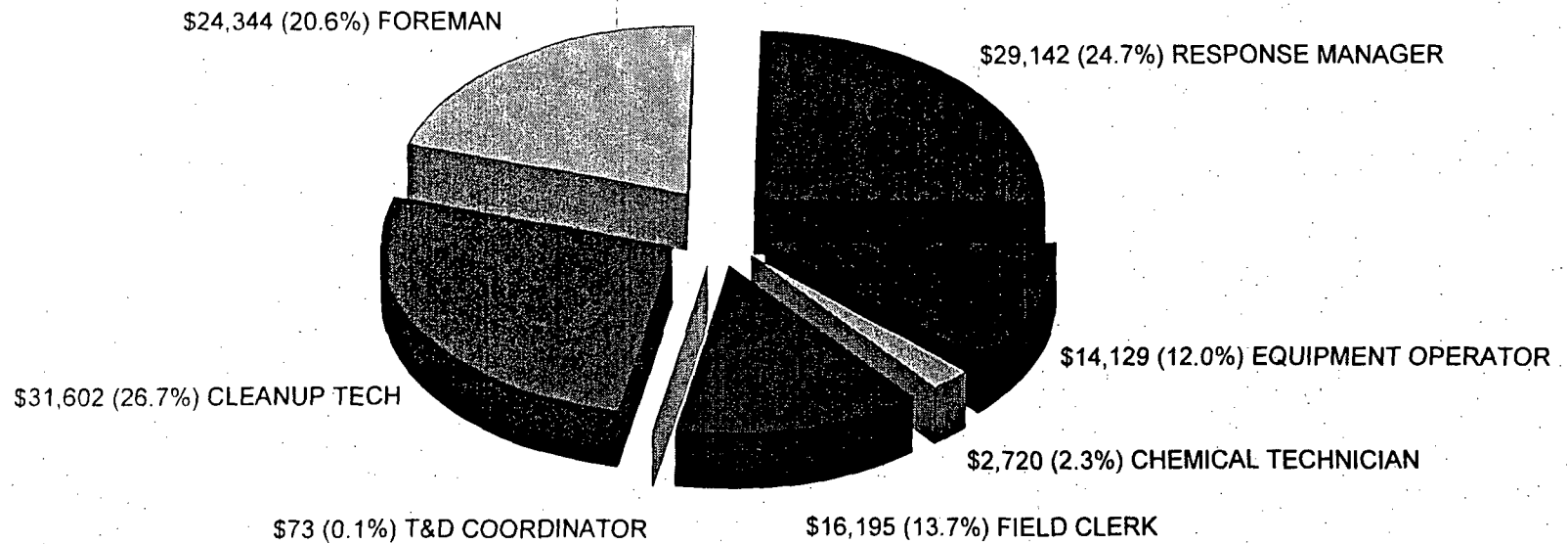
Personnel Summary Report (Categorical)

Prime Contractor: Earth Technology, Inc  
 Site: Evor Phillips (2101-S6-007 )

Date Range: 01/16/97 - 10/24/97

Employee Category	Regular Hours	O.T. Hours	Regular Pay	O.T. Pay	Total Hours	Indirect Cost	Total Charge
Contractor: Earth Technology, Inc (ETI2)							
S1-05-01: Response Manager	547.5	96.5	24703.20	4354.08	644.0	85.28	29142.56
S1-10-01: Foreman	363.5	78.0	9840.02	3167.61	441.5	0.00	13007.63
S1-10-02: Foreman	295.5	49.5	9060.03	2277.00	345.0	0.00	11337.03
S2-03-01: Clean-Up Technician	1033.0	207.5	24286.12	7316.45	1240.5	0.00	31602.57
S2-05-01: Equipment Operator	343.5	69.0	10858.12	3271.32	412.5	0.00	14129.44
S2-10-01: Field Clerk/Typist	463.0	117.5	11672.36	4442.72	580.5	80.54	16195.62
S3-07-02: Chemical Technician	58.5	28.0	1583.60	1137.08	86.5	0.00	2720.68
S4-05-01: Chemist / Organic	0.0	0.0	0.00	0.00	0.0	0.00	0.00
S4-30-01: Ind Hygienist/Safety	0.0	0.0	0.00	0.00	0.0	0.00	0.00
S5-20-01: T&D Coordinator	2.5	0.0	73.45	0.00	2.5	0.00	73.45
(Totals)	3107.0	646.0	92076.90	25966.26	3753.0	165.81	118208.97
Contractor: Onsite Environmental (ONST)							
S2-03-01: Clean-Up Technician	0.0	0.0	0.00	0.00	0.0	0.00	0.00
S2-03-03: Clean-Up Technician	62.0	12.0	0.00	0.00	74.0	0.00	0.00
S2-03-XX: Clean-Up Technician	63.0	14.0	0.00	0.00	77.0	0.00	0.00
(Totals)	125.0	26.0	0.00	0.00	151.0	0.00	0.00
(Site Totals)	3232.0	672.0	92076.90	25966.26	3904.0	165.81	118208.97

**PERSONNEL COSTS**  
EVOR PHILLIPS SITE



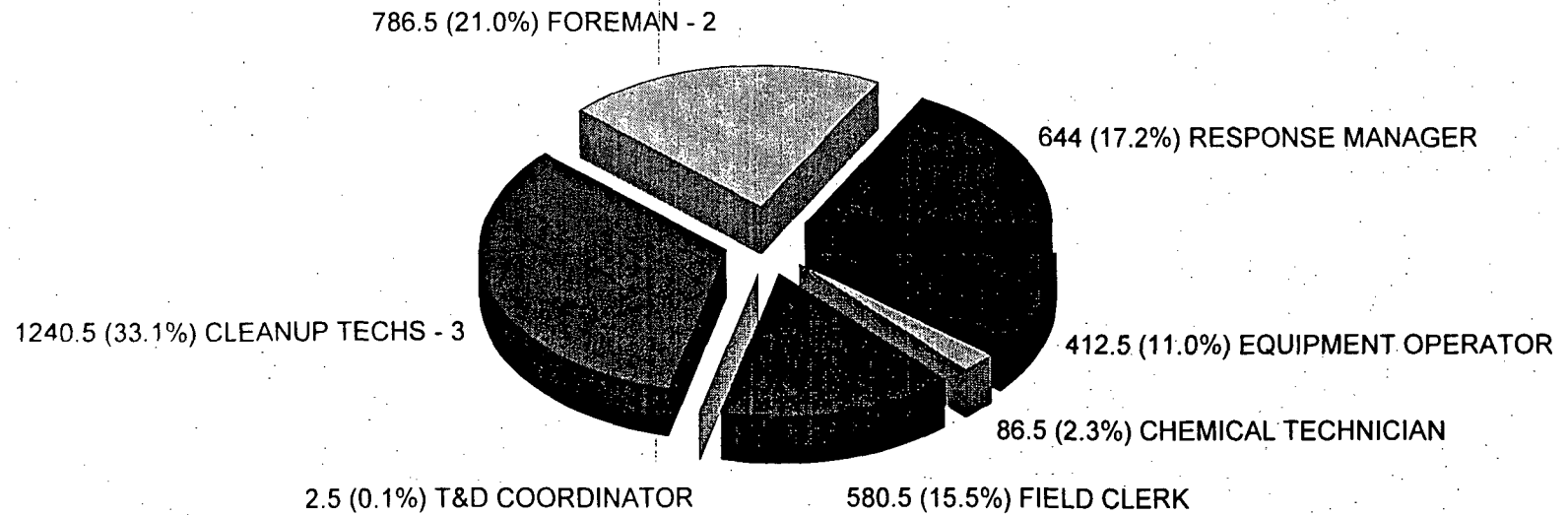
**TOTAL ERCS PERSONNEL COSTS = \$118,208**

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# PERSONNEL HOURS WORKED

EVOR PHILLIPS SITE



TOTAL HOURS WORKED BY ERCS = 3,753

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Equipment Summary Report (Categorical)

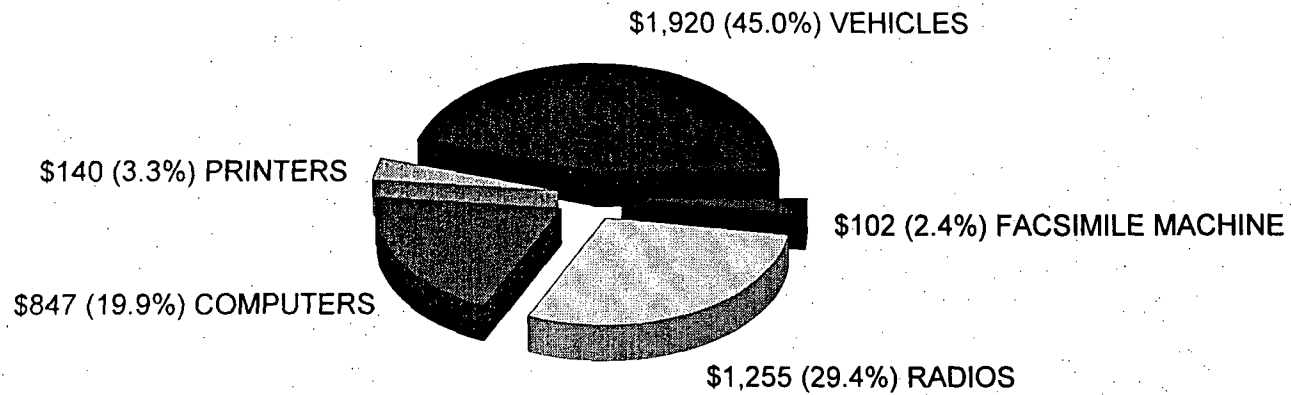
Contractor: Earth Technology, Inc  
 Site: Evor Phillips (2101-S6-007)

Date Range: 01/16/97 - 10/24/97

Equipment Item	Hours	Charge	Indirect Charge	Total Charge
Contractor: Earth Technology, Inc (ETI2)				
1-09-10 Truck-Car-Passenger	960.50	1920.00	0.00	1920.00
1-36-10 Truck-Pickup-2 wheel drive	442.50	0.00	0.00	0.00
1-54-20 Truck-Van-Mini	446.00	0.00	0.00	0.00
5-15-10 Safety-Radio-Handheld	<del>2522.00</del>	1255.00	0.00	1255.00
7-23-20 Field Equipment-Computer-Portable PC	1052.50	847.00	0.00	847.00
7-23-40 Field Equipment-Computer-Laser Printer	559.00	140.00	0.00	140.00
7-45-10 Field Equipment-Facsimile Machine-	499.50	102.00	0.00	102.00
(Totals)	6482.00	4264.00	0.00	4264.00
(Site Totals)	6482.00	4264.00	0.00	4264.00



**ERCS EQUIPMENT COSTS**  
EVOR PHILLIPS SITE



**TOTAL ERCS EQUIPMENT COSTS = \$4,263**

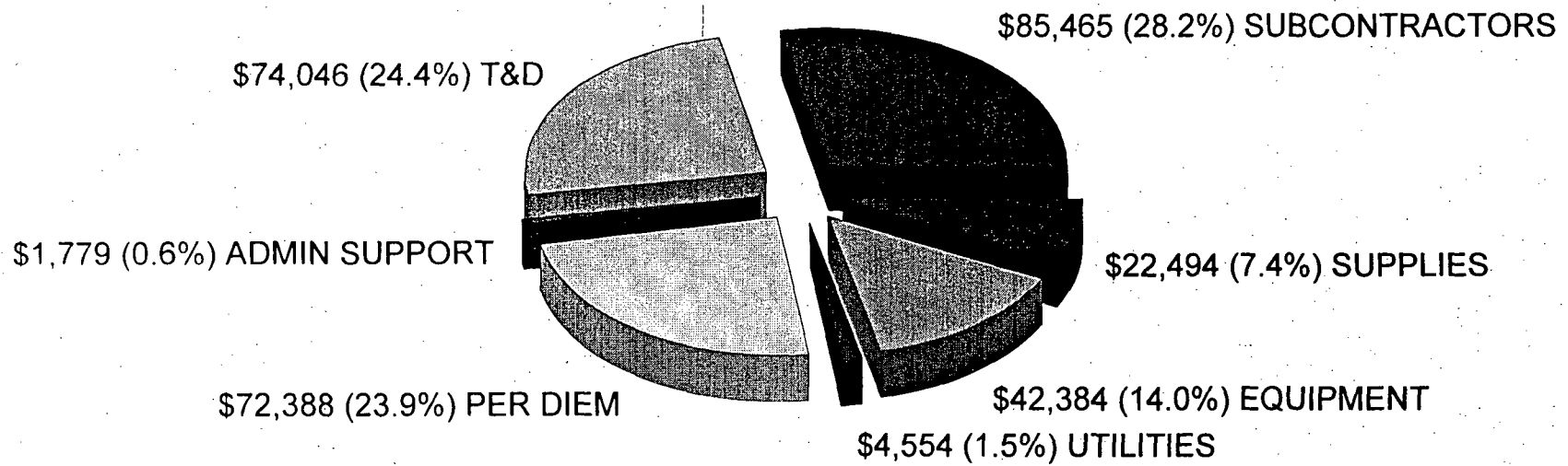
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**EVOR PHILLIPS OTHER COST INFORMATION**

<u>CATEGORY</u>	<u>ITEM</u>	<u>COST</u>	<u>TOTAL</u>	<u>% OF TOTAL</u>
<b>R &amp; D</b>	Analytical	\$22,864.93	\$74,046.02	24.43%
	Disposal	\$14,241.21		
	Roll Off Rental	\$36,939.88		
<b>Utilities</b>	Electric Usage	\$447.54	\$4,554.39	1.50%
	Phone	\$4,106.85		
<b>Admin Support</b>	Water Coolers	\$203.13	\$1,779.90	0.59%
	Porta Johns	\$538.65		
	Dumpster	\$198.45		
	Copier	\$839.67		
<b>Per Diem</b>	Lodging	\$40,116.42	\$72,388.68	23.88%
	Expenses	\$6,509.34		
	Wage Adjustment	\$650.93		
	Diems	\$25,111.99		
<b>Supplies</b>	Laboratory	\$349.80	\$22,494.13	7.42%
	Alarm	\$3,023.12		
	Exhaust Hose	\$419.80		
	Drums	\$6,870.69		
	Hardware	\$402.48		
	Breathing Air	\$741.64		
	Signs	\$146.89		
	Backfill	\$3,374.82		
	PPE	\$7,164.89		
	<b>Equipment</b>	Forklift		
Trailers		\$7,604.23		
Car		\$2,854.40		
Truck		\$3,200.00		
Backhoe		\$5,670.00		
Compressor		\$1,200.00		
Loader		\$3,662.49		
Manlift		\$3,858.50		
Excavator		\$7,119.77		
Pressure Washer		\$254.19		
Partner Saw		\$161.76		
Jack Hammer		\$251.88		
Scrubber Unit		\$6,277.58		
<b>Subcontractors</b>	Sprung Structure	\$53,596.71	\$85,465.01	28.20%
	Crane & Operator	\$3,128.12		
	Electrical	\$5,953.58		
	CAN	\$5,011.71		
	Shipping	\$1,001.82		
	OnSite Personnel	\$10,144.30		
<b>TOTAL</b>			<b>\$303,112.53</b>	<b>100.00%</b>

# OTHER COSTS

EVOR PHILLIPS SITE



**TOTAL ERCS OTHER COSTS = \$303,112**

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**Photograph Number**

**Description**

1. Magnetometer survey of suspected burial area
2. Ground penetrating radar survey of suspected burial area
3. Construction of containment structure skeleton
4. Completed containment structure skeleton
5. Installation of containment structure fabric
6. Inside view of completed containment structure
7. Containment structure air treatment units
8. Exterior view of completed containment structure
9. Excavation in Section II
10. Drum removal from Section II
11. Section II excavation
12. Lab packs removed from Section II
13. Concrete ramp uncovered in Section III
14. Debris removed from Section IV
15. Inter-connected concrete vaults in Section IV
16. Lab Pack crushing operation
17. Pressure wash decontamination of containment structure
18. Dismantling of containment structure



PHOTO 1:



PHOTO 2:



PHOTO 3:



PHOTO 4:



PHOTO 5:

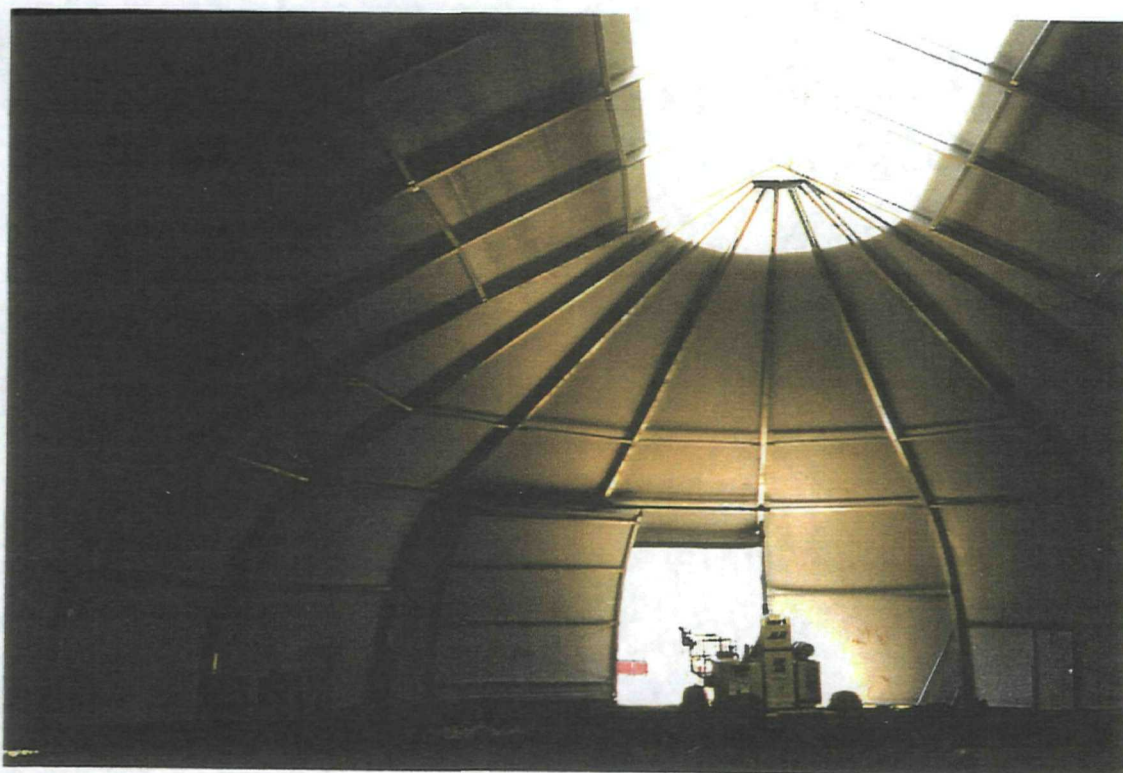


PHOTO 6:



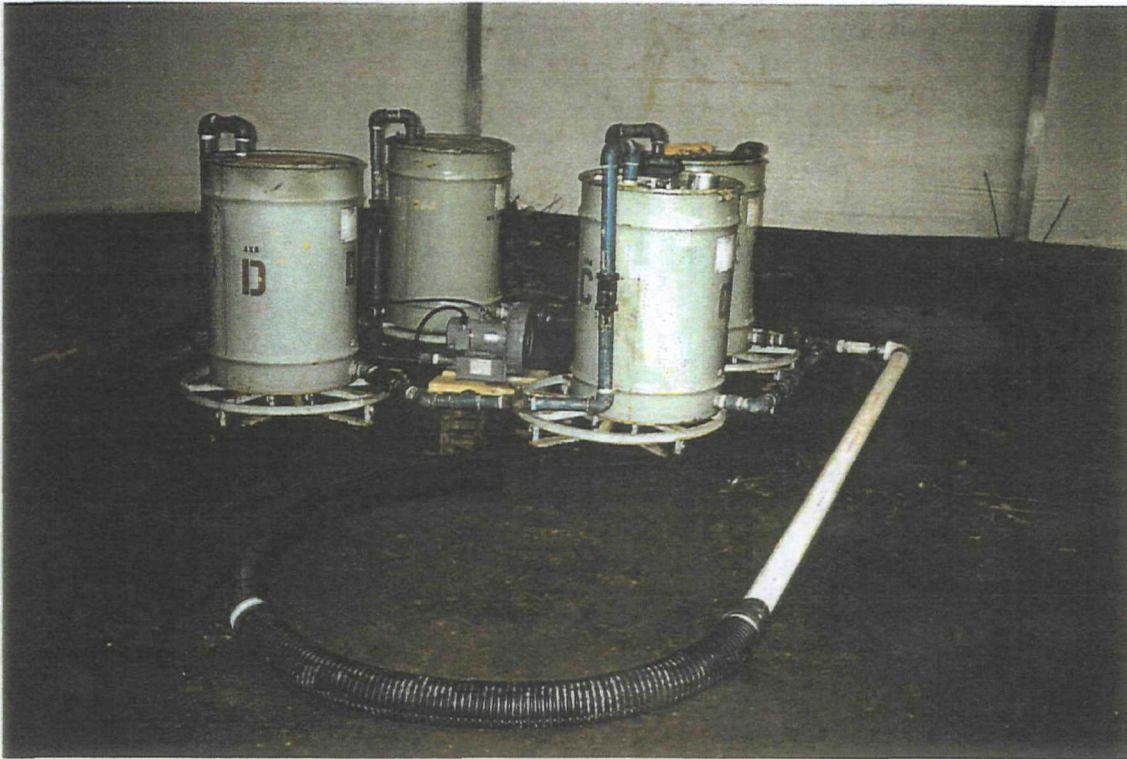


PHOTO 7:



PHOTO 8:



PHOTO 9:



PHOTO 10:



PHOTO 11:



PHOTO 12:



PHOTO 13:



PHOTO 14:

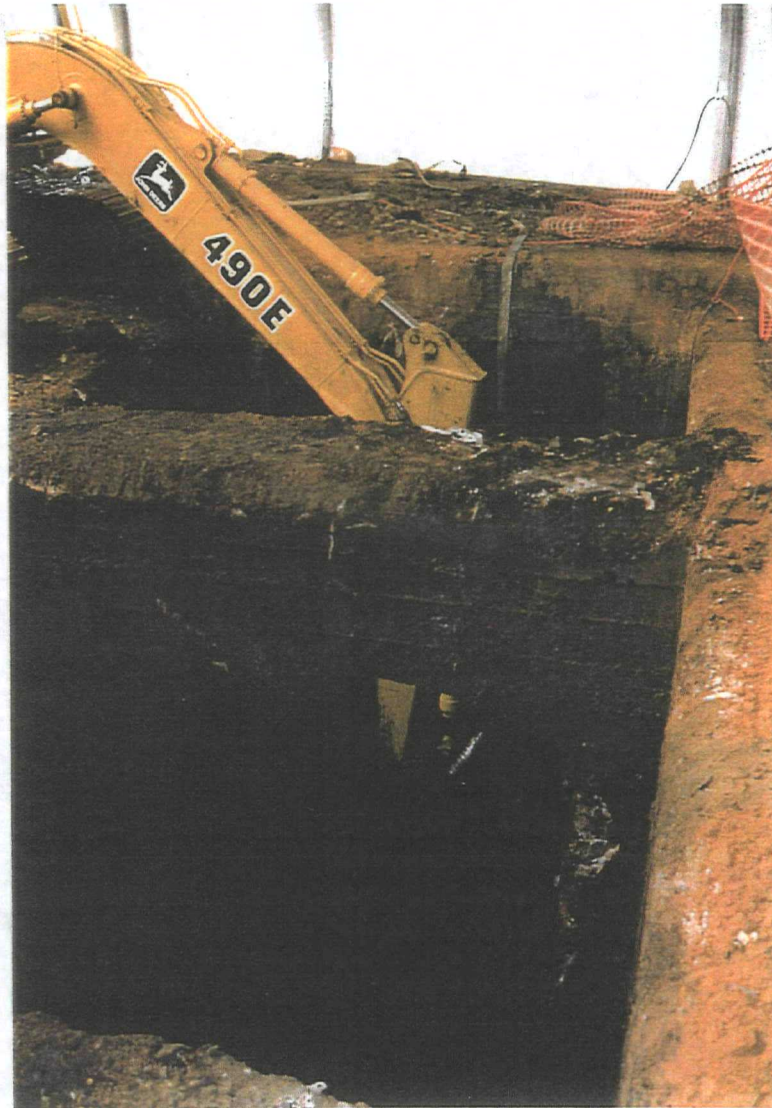


PHOTO 15:



PHOTO 16:



PHOTO 17:



PHOTO 18: