A MEMBER OF THE ENVIRONMENTAL RESOURCES MANAGEMENT GROUP

Environmental Site Assessment: Chemical Waste Management Hopewell Facility

7515 Harvest Road
Prince George County, Virginia

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ERM

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1.0 INTRODUCTION

Environmental Resources Management, Inc. (ERM) performed a combined Phase I/Phase II Environmental Site Assessment at the Chemical Waste Management facility located at 7515 Harvest Road in Prince George County, Virginia.

The primary purpose of this investigation is to identify potential environmental liabilities associated with the property. At the request of Clean Harbors, ERM performed concurrent site assessment and site characterization activities, including the following tasks:

1) A detailed site visit and characterization of the property, including an on-foot survey. The property was investigated for signs of: open dumping; trash; areas of dead, stressed, or dying vegetation; stained soils; impoundments; seeps; oil slicks or discoloration on surface water; discernible chemical odors; storage tanks; vertical pipes, casings, or other indications of underground storage tanks; drums; transformers; and recent soil disturbances such as grading or filling. The property was also evaluated for the presence of Federally-defined wetlands.

2) A preliminary visual inspection of readily accessible areas of the property for possible friable asbestos-containing material. Samples were taken from floor and acoustical ceiling tiles, caulking, and adhesives.

3) A review of readily available records to determine the history of the property with an emphasis on uses that might have included the generation, storage, treatment, or disposal of hazardous materials.

4) An identification of neighboring activities that may have an effect on the environmental quality of the property, by observing surrounding land use.

5) A review of local state and federal records and/or telephone interviews with regulatory officials .

6) Three new wells were installed, and ground water samples were obtained from these and two previously existing wells for analysis at Clean Harbors' laboratory. Soils from well borings were screened to detect contamination with volatile organic compounds.

7) Soil surface samples were collected from eight areas on site with soil staining and analyzed at Clean Harbors laboratory.

8) Water levels were measured in the new and existing wells to assess the direction of ground water flow.

This report describes the results of all tasks, including recommendations for activities that could further define or resolve identified issues.

2.0 *SITE DESCRIPTION*

2.1 *GENERAL SETTING AND NEIGHBORING PROPERTIES*

Chemical Waste Management leases 3.8 acres in Forbes Industrial Park within a lightly developed agricultural/residential/industrial region. The industrial park is located along Route 156 about twenty miles southeast of Richmond. A two-lane paved road approaches the site.

Immediately northwest of the subject site, across Harvest Road, is Virginia Sealing Products. About 0.25 mile to the southwest, a number of residences are separated from the site by a wooded area. Property southeast of the site is an open field; the boundary on this side is marked by a drainage ditch. The ditch leads to an impoundment, which marks the northeastern boundary. Across the impoundment from the site lies an abandoned warehouse and, beyond it, another building owned by a cleaning division of Ameriquest.

The Chemical Waste Management property is situated at approximately 130 feet above mean sea level (MSL) in an area characterized by relatively flat topography. The site is represented on the U.S. Geologic Survey Prince George, Virginia 7.5 minute topographic series quadrangle (see Figure 1). The site slopes down from east to west, and surface drainage is apparently into the North Fork of Blackwater Swamp located approximately 2000 feet south of the facility. Waters of the Blackwater Swamp enter the Blackwater River, which flows southward to the Chowan River watershed.

The site lies on the western boundary of the Coastal Plain Physiographic Province and is underlain by the Bacon's Castle Formation of Upper Pliocene age. Site geology is characterized by unconsolidated, layered sediments overlying a basement of granite. These sediments consist of a massive to thick bedded pebble and cobble gravel, grading upward into crossbedded, pebbly sand and sandy clayey silt. The Coastal Plain sediments gradually thicken and deepen eastward from the Fall Line, about twenty miles west of the property. Regional ground water flow is eastward towards the Atlantic Ocean and generally follows the eastward dipping contour of the granite basement rock. Ground water flow in the uppermost water table aquifer generally mimics topography; at the

Chemical Waste Management site, ground water flow is south west towards the Blackwater Swamp. The water table aquifers in the Coastal Plain sediments generally have a high pollution potential.

2.2 *PROPERTY DESCRIPTION*

A site visit was conducted on 30 June 1994 by Gina Dixon and Suzanne Ruck of ERM. John Andrews, Facility Manager, provided access to the facility as well as background information regarding the subject property. This section contains observations made during the site walk-through. A facility site plan is illustrated in Figure 2, and photographs of the site are included in Appendix A.

Chemical Waste Management is an interim status RCRA treatment facility with the EPA ID number VAD988175055. CWM Hopewell accepts D001, D002, D008, and D018 waste. Virginia has RCRA primacy and has not yet called the Part B permit. Appendix B contains the facility's Part A permit application.

The treatment facility separates and adsorbs waste petroleum products from water. Figure 3 is a flow diagram of the process. The area of operations, behind the main building, is secured by a fence in excellent condition. Motion sensors provide additional security. Two gates provide access, one next to the building and one at the back end of the property. Most of the property has been covered with gravel. Off site operations conducted from this location by Chemical Waste Management include spill response, tank cleaning, process equipment cleaning, tank removal, and small site Remediation services. The site utilizes EPA ID No. ILD099202681 as a hazardous waste transporter. The combined field operations, facility operations, and support staff currently employ twelve people.

The main structure is a metal building that houses offices, supplies, and equipment (Photo 1). The interior of the building is divided into two main parts. The front portion, approximately 25 percent, is finished office space, and the remaining 75 percent is a warehouse used for storage of equipment and supplies. The warehouse includes a loft above the offices where site supplies are kept. A sign indicates the loft has a carrying capacity of 40 pounds per square foot, and all low-hanging pipes are marked with warning tape. The loft overlooks a tool crib that is

constructed against the back of the office space to house equipment (Photo 2).

A small room in the warehouse, also constructed along the back of the office space, serves as an in-house lab (Photo 3). Here, tests are performed for waste classification and include pH, flash point and halide screen. An eyewash and a safety shower are located in the warehouse just outside the lab at the entrance to the offices. Two air horns are used as emergency signaling devices, one in the lab and one in the tank farm. Fire extinguishers, located under the stairs to the loft and in the tank farm, are tested by an outside firm on a monthly basis. The Prince George Fire Station is located along Route 106 approximately 3 miles from the site.

Among documentation on site are the inspection logs recording daily inspections of tank systems, hazardous waste storage areas, and security systems. Inspections of safety equipment are kept in a monthly log. A work order log sheet shows fairly frequent actions including repairs, labeling, and housekeeping.

Treatment takes place in the tank farm located inside a concrete berm directly east of the main building (Photo 4). The treatment unit is rated at 3,000 gallons per hour, but the facility typically processes 10,000 to 15,000 gallons per day of waste. This area consists of three large tanks of liquid waste with a filter system and retention tanks. Liquid waste starts in these three large vertical tanks and gets pumped first through the separator, then flows through the effluent tank and finally through the carbon filter system for treatment. Waste generated during field operations as well as material shipped from customers is processed here. Most waste handled on site comes from leaking underground storage tanks (LUSTs). Processed water is retained in two wastewater storage tanks to be trucked to the Hopewell Wastewater Treatment Facility for further treatment. Petroleum products are shipped to outlets for recovery.

The concrete berm has been caulked to repair cracks that apparently arose during extreme cold weather in early 1993. A review of facility inspection logs indicates that the crack was irreparable (due to weather) for approximately four months. Connection hoses are lying inside and outside the bermed area (Photo 5). Many of them are taped and appeared to allow leakage during material transfer. Any residual liquid collected in the berm is pumped into the hazardous waste tank to be processed.

Other on-site areas include a roll off pad, soil piles, empty drum storage, and truck wash. Solid waste is stored in a plastic-covered roll-off on the roll-off pad for removal to a landfill. Empty drums are kept around the interior edge of the fence, and a pile of coarse, sandy soil lies immediately outside the fence. The soil is from underground storage tank removal projects and, according to Mr. Andrews, was tested and is not contaminated. The truck wash is located north of the building and used to wash trucks and equipment. Temporary features on site include tank storage east of the tank farm and truck parking in the northern corner.

2.2.1 *Water Supply and Wastewater*

Water is supplied by a well located on the northwest side of the building. The well is shallow, reaching a depth of about 25 feet. The water it yields is not potable, but is used for restroom and truck wash facilities. Wastewater from restrooms is discharged into a septic system located outside the southwest, or front, part of the building. Wastewater from process operations is retained for transport by tank truck to the Hopewell Regional Wastewater Treatment Facility.

Chemical Waste Management has a permit (No. 0600) to discharge industrial wastewater to the Hopewell Regional Wastewater Treatment Facility, effective 2 November 1993 through 1 August 1994. The permit is not transferable. Flows typically range from 6,000 to 30,000 gallons per month. Parameters to be tested and reported on a monthly basis include TOC, TPH and TCLP. TCLP tests must be performed on a composite of normal wastewater quality and strength of that month made from all loads hauled to the Regional Plant for disposal. The permit requires reporting, but no numerical limits are associated with the parameters (except as TCLP results define waste as hazardous). Records for 1994 indicate that benzene was detected at a level of 0.169 mg/l in one sample; no other detections of TCLP volatiles were noted. Appendix C contains a copy of the permit, as well as a legal opinion regarding the regulatory status of the waste water.

2.2.2 *Chemical Usage and Storage*

Process and chemical supplies are stored in the warehouse. Two 55 gallon drums of diesel engine oil, a third drum containing oily rags, a Safety Kleen sink with petroleum naphtha, and a flammables storage cabinet are located along the southern wall. One of the oil drums is surrounded by sorbent for spills, and the flammables cabinet is rather disorganized

(Photo 6). The northern wall is lined with shelves containing bags of activated carbon, six pails of concrete sealant, and two plastic blue drums labeled corrosive. The floor below the shelves is stained a rust color, which could be from leaking rainwater. A tipped container shows that storage on shelves is not orderly (Photo 7). The warehouse floor does not have any apparent cracks and does not have an interior drain. It is bare concrete except for a coated, bermed area along the back wall, in which was formerly housed a storage tank.

2.2.3 *Transformers*

There are two Prince George Electric Co-op 15 KVA transformers on a utility pole just outside the southeastern corner of the building (Photo 8). In a phone conversation, Prince George Electric Co-op employee Joel Valley stated that the gray color indicated it had been replaced in the mid to late 70's. The Co-op changed the exterior color from navy blue around 1975 as a visual indication of newer units. A visit to the site by the utility concluded that the transformers had not been tested but that particular unit was purchased in 1975, and was assumed to be a PCB contaminated transformer (50 to 500 ppm).

2.2.4 *Storage Tanks*

There are five above ground storage tanks (ASTs) in the concrete containment area. Three of these are located in the pre-treatment area. Tank T-101, is the largest with a capacity of 15,000 gallons. It contains the hazardous waste to be processed, ranging from light petroleum distillates to mixtures of aliphatic petroleum hydrocarbons and water. The concrete berm reportedly has a design volume of 18,000 gallons.

T-101 is a double-walled and double-bottomed AST made of commercial grade steel. It is equipped with a high level gauge and automatic shutoff. The tank, service openings, and associated piping are coated with a red oxide industrial strength primer. A tightness test and inspection was performed on 27 August 1993 by RUST Environment and Infrastructure, Inc. and no evidence of leaks, weld breaks, punctures, cracks, or corrosion to the exterior of the tank was observed at that time. A tightness test was also performed on the auxiliary piping connected to the AST on 17 December 1993. RUST certified that the tank system complied with standards in 40 CFR 265.192. A copy of the certificate is included in Appendix D.

Two other tanks, T-102 and T-103, each hold about 12,000 gallons of non-hazardous waste in a containment berm with a 16,900 gallon capacity. Two additional tanks house the treated liquids. Tank T-104 holds 1,000 gallons of effluent and tank T-105 holds 12,000 gallons of wastewater.

ERM reviewed the Oil Spill Prevention, Control, and Countermeasures Plan and Emergency Contingency Plan for the site and found them to be adequate.

There are no records of current or previous underground storage tanks on site.

2.2.5 *Asbestos-Containing Materials*

ERM conducted a preliminary visual inspection of readily accessible and visible areas of the building for the presence of potential asbestos-containing material (ACM). No friable suspect materials were observed during the site visit. According to Mr. Andrews, new floor and ceiling tiles were installed when CWM acquired the site in 1991. Six samples were collected for testing by Marine Chemist Service, Inc.: from window caulking, vent caulking, plain ceiling tile, a floor tile with adhesive, and two textured ceiling tiles. Five of the samples were asbestos-free, but the nonfriable vent caulking was found to contain 30% chrysotile asbestos. A copy of the lab report is included in Appendix E.

2.2.6 *Urea Formaldehyde Foam Insulation*

The readily accessible areas of the property were inspected by ERM for sprayed-on insulating materials that may contain urea formaldehyde resin. No such material was observed.

2.2.7 *Waste and Refuse Disposal*

According to Mr. Andrews, nonhazardous solid waste is transported to the Shoosmith Brothers landfill in Chesterfield, Virginia.

2.2.8 *Air Emissions*

The entire treatment/filtering process employs closed tanks, piping and other process equipment. Air emissions would be associated with fugitive releases and would not be expected to be significant. The facility has no

air permits, and it appears that none will be required under current and proposed regulations.

2.2.9 *Wetlands*

A review of Prince George County Planning Department records indicates that no wetlands have been identified on the site. The site inspection revealed very small areas of wetlands indicated by vegetation along the drainage ditches. Mr. Andrews was not certain whether these areas were within the boundaries of the leased property.

3.0 HISTORICAL LAND USE

3.1 DEED REVIEW

A chain of title was prepared by Vista Environmental Information, Inc. The ownership of the Forbes Industrial Park property is summarized below and the report is provided in full in Appendix F.

Records show that the land occupied by Chemical Waste Management belonged to Joseph B. and Mabel B. Bishop prior to 1944. The title was transferred to Francis Alexander Epps on 15 April 1946, until he and his wife, Olivia T. Epps, deeded it to Alfred A. and Katherine W. Forbes on 22 August 1973.

The Forbes' leased the land to Lloyd Taylor, Inc. on 28 May, 1975. On 6 January 1976, the Forbes deeded the land to E. J. Bell. Mr. Bell and his wife, Edith P. Bell, transferred the property to the Forbes on 27 July 1976. On 23 June 1993 Mr. Forbes acquired sole ownership by the last will and testament of his wife, Katherine Wiggins Forbes.

According to Mr. Forbes, current owner, the site was originally leased to a pallet manufacturer, then to a machine shop, and after that, to Belpar. Belpar changed its name to Belpar Environmental and then sold its possessions to Chemical Waste Management.

3.2 AERIAL PHOTOGRAPHS

Aerial photographs from the Prince George County Soil Conservation Office and Virginia Department of Transportation were reviewed for indications of past land use. The earliest photo (1:33,600), taken 6 May 1966, shows only an area of houses south of the property along Route 156. This residential area occupies one third of the present industrial park and is the only portion that has been cleared. Surrounding properties are agricultural along the roadside with wooded interiors.

In the 6 July 1979 photograph (1:24,000), most of the change in the vicinity occurred within the existing industrial park; the surrounding area remains unchanged. The residential area is more prominent, the majority of the

industrial park is cleared, and the lake has been constructed. The building currently occupied by CWM has been erected, and Harvest Road curves right up to it. The future tank farm area had been cleared and has grown over again. The space between the site and the houses remains wooded.

In another 1979 photo viewed at the Soil Conservation Office (scale and exact date unknown), white rectangular structures cast long shadows in an area north of the site at the end of the road. These features are not apparent in photographs of the same year from the Department of Transportation.

In a 1989 photo (scale unknown), the industrial park has been fully cleared and the course of Harvest Road has been straightened. The tank farm and the fence are still absent. A large white circle appears at the southeast corner of the property. This circle may have been a tank that has since been removed; ERM could find no confirmation of such a structure..

The most recent photo, taken 19 October 1990 (1:24,000), shows the building as it stands now, but without the tank farm beside it. The future tank farm area is occupied by trailers, and the property was not yet fenced.

4.0 ENVIRONMENTAL DATABASE SEARCH

ERM utilized the services of VISTA Environmental Information, Inc., to obtain a Site Assessment Report (see Appendix G) of environmentally related activities in the vicinity of the subject property. The computer database was searched using the zip codes within a one-mile radius of the property. The profile report includes sites on the National Priorities List (NPL), known or suspected contaminated sites (sites listed in the Comprehensive Environmental Response Compensation and Liability Information System [CERCLIS]), hazardous and solid waste treatment, storage and disposal (TSD) facilities permitted under the Resource Conservation and Recovery Act (RCRA), RCRA hazardous waste small and large quantity generators, and RCRA hazardous waste transporters. The radius profile also reports search results from the Virginia Department of Environmental Quality (VADEQ) records of State Hazardous Waste Cleanup Sites (SPL), underground storage tanks (USTs), leaking underground storage tanks (LUSTs), solid waste facilities and transfer stations.

No State Priority List Sites or Solid Waste Management Facilities were reported within 1.0 and 0.5 miles, respectively, of the Chemical Waste Management site. One leaking underground storage tank was revealed by the search at Burrowsville Elementary School. The school is located on Route 10 approximately seven miles from the site, too far away to affect the CWM site.

No NPL sites or RCRA TSDFs were reported within a one-mile radius of the Chemical Waste Management property. Chemical Waste Management was not listed in the Vista database as a TSDF, but it was reported as the one generator of hazardous waste reported within 0.25 miles. No CERCLIS sites were reported within the search radius.

The Emergency Response Notification System (ERNS), and the EPA database of RCRA compliance actions and consent orders were also searched for the area. No sites were identified within the area of concern.

ERM also acquired a Facility Risk Profile (Appendix H), which held two records regarding the subject. The EPA RCRIS and FINDS databases contained records that this facility is a Hazardous Waste Transporter and

Hazardous Waste Generator. There were no records of environmental noncompliance found.

5.0 PHASE II ESA SITE CHARACTERIZATION

The Phase II ESA was conducted to document existing site conditions and assess the environmental effect of past and present on-site operations. To further evaluate site conditions, ERM supervised and documented the installation of three ground water monitoring wells, collected surface soil samples and ground water samples for laboratory analyses and, conducted volatile organic field screening of soil boring samples.

The Phase I study revealed that while the property was operated by Belpar, ground water sampling of four monitoring wells was conducted. Three of these wells have since been abandoned. Historical data from these wells and from the installed Phase II wells were reviewed to assess environmental impacts from site operations, and to assess current site conditions and possible liabilities associated with potential site acquisition.

5.1 PHASE II FIELD INVESTIGATION

ERM initiated the Phase II ESA with the installation of three ground water monitoring wells and the collection of eight composite surface soil samples from eight areas of potential concern. Soil and ground water samples were obtained for laboratory analyses for total petroleum hydrocarbons (TPH), target compound list (TCL) of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs).

ERM subcontracted borehole drilling and well installation activities with Fishburne Drilling. Soil and ground water samples were submitted to Clean Harbors Environmental Services, Inc. analytical laboratory.

5.1.1 Soil Sampling

The initial site visit and Phase I ESA identified eight areas of potential petroleum impacts to surficial soils from routine site activities (Figure 2); these areas are:

1) Tank Farm
2) Roll Off Pad

3) Truck Wash Area
4) Truck Parking Area
5) Temporary Tank Area
6) Soil Piles
7) Empty Drum Storage Area
8) Storm Water Grate Area

On 30 June 1994, surficial soil samples were collected from each of the eight areas. Surface soil samples were collected from several locations within each area and composited for laboratory analysis. The areas sampled and approximate locations of samples within each area are shown on Figure 4. A stainless steel spade and mixing bowl were used to collect and composite each sample. Due to the volatile character of the constituents, samples for VOC analysis were not composited by mixing the aliquots; grab samples from each location were placed in the VOC sample container. Surface sampling depths ranged from about one to four inches deep. The surface gravel, which covers much of the site, was scraped away to obtain the soil samples.

Surface soil samples were collected for laboratory analysis of VOCs (Method 8240), SVOCs (Method 8270), PCBs (Method 8080), and TPH (IR Method 418.1). The samples were placed in laboratory provided sample containers and preserved on ice for shipment, under chain-of-custody, to Clean Harbors' laboratory.

5.1.2 *Well Installation*

Three soil borings were constructed at the site using hollow stem auger drilling methods. The soil borings were then converted into monitoring wells MW-1, MW-2, and MW-3. MW-1 is located adjacent to the eastern fence line between the roll off pad and empty drum storage area. MW-2 lies between the main building and tank farm, and MW-3 is situated near the downgradient boundary of the site to monitor the quality of ground water migrating off site. Boring/well locations are shown on Figure 4. Two existing wells are present on the site: one monitoring well, located northwest of the pond, and a production well adjacent to the main building (Figure 4).

An Acker AD II truck mounted drill rig, equipped with 4.25-inch inside-diameter hollow stem augers, was used for soil boring and well installation. The wells were installed inside the hollow stem augers,

which were gradually removed as the annular space materials were placed around the well. The monitoring wells were constructed using two-inch diameter threaded, flush-joint Schedule 40 PVC with a machine-slotted well screen (slot size of 0.010 inches). A medium to coarse quartz sand filter pack was poured around the well screen from inside the augers. A bentonite seal capped the sand pack. The remaining annular space was filled with grout. A protective well cover was installed around MW-1 and MW-3; a flush mounted protective cover was installed in MW-2 to accommodate site activities.

The monitoring wells were constructed such that the screen interval extends across the water table to intercept any free phase hydrocarbons in the subsurface. Water was encountered in each boring at depths between 10 and 15 feet below grade. Using a 10 foot section of well screen, the wells were completed to depths of approximately 20 feet. Well construction details are presented on the soil boring logs provided in Appendix I.

Following completion of well construction, the wells were developed using PVC bailers to evacuate three to five well volumes. Approximately fifteen gallons of ground water was removed from each well. The water was relatively turbid; however, no odors or visible signs of petroleum contamination were noted.

5.1.2.1 *Field Screening of Soils*

Continuous split spoon soil samples were collected from each boring for volatile organic field screening analyses using a MicroTip Photoionization Detector (PID). A soil aliquot from each split spoon sample was placed in a glass jar to half fill the jar; the jar was immediately sealed. A PID measurement of the headspace in the jar was recorded; these results are included on the boring/monitoring well logs provided in Appendix I.

5.1.2.2 *Decontamination*

Prior to initiating the field activities, the drill rig, augers, and sampling equipment had been decontaminated by Fishburne Drilling. A decontamination area was established in the vicinity of the roll off pad and consisted of a bermed area lined with plastic sheeting. During the field investigation, the split spoon samplers were decontaminated after each sample was collected. Potable water in a five gallon bucket and scrub brushes were used for cleaning the samplers. After the completion

of each soil boring/monitoring well, the hollow stem augers were transported to the decontamination area and steam cleaned.

5.1.2.3 *Containment of Investigation Derived Wastes*

All drill cuttings were contained by shoveling the soils into either a wheel barrow or a 55 gallon drum for containment. These soils were then transported to an area near the roll off pad and placed on plastic sheeting. All decontamination, well development, and purge waters were contained in a 55 gallon drum. The drum was placed in the tank farm area and the waters discharged into the site oil-water separator.

5.1.3 *Ground Water Sampling*

On 7 July 1994, ground water samples were obtained from the three newly installed wells (MW-1, MW-2, and MW-3), and from the two existing wells (supply well and existing monitoring well). The samples were collected following a measurement of the static water level, and purging of three well volumes of ground water from each well. An electronic water-level meter was used to determine the depth to water in each well. A transit was used to measure the relative elevations of the wells for use in determining the direction of ground water flow. All measurements were made from the top of the well casings. New, clear disposable polyethylene bailers, secured with clean nylon chord, were used to purge and sample each well. The samples were placed in laboratory provided sample containers and preserved on ice for shipment, under chain-of-custody, to the laboratory. Samples were collected for laboratory analysis of VOCs (Method 8240), SVOCs (Method 8270), PCBs (Method 8080), and TPH (IR Method 418.1). Quality control included one VOC trip blank.

5.2 *PHASE II ESA FINDINGS*

5.2.1 *Soils*

Soils underlying the site consisted of an interbedding of silty clays, silts, and sands to depths of 23 feet. Depth to ground water is approximately 12 to 15 feet below the ground surface. Moist to wet soils were encountered at depths of about 15 feet. Lithologic descriptions are provided on the boring logs in Appendix I. There were no visible signs of petroleum contamination in subsurface soils during the investigation. Headspace analyses of split spoon samples are presented on the boring logs provided

in Appendix H. Headspace measurements for VOCs in all subsurface soil samples were below 2 ppm, suggesting no petroleum contamination.

Analytical results of surface soil samples submitted to Clean Harbors' laboratory are summarized in Table 1. Laboratory data reports are provided in Appendix J.

The most significant findings from the surface soil sample results are:

- The detection of TPH in seven of the eight surface samples at levels up to 9,900 mg/kg (in soils from the truck parking area); and

- The detection of 0.1 mg/kg PCB (Aroclor 1260) in surface soils in the truck wash area.

TPH concentrations in other surface soil samples ranged from 160 mg/kg (storm grate) to 390 mg/kg (roll off pad). It should be emphasized that these samples were collected from the surface (0 to about 3 inches) and may merely reflect petroleum impacts from vehicle traffic; these data do not necessarily reflect a site release or spill. However, the higher TPH level (9,900 mg/kg) detected in the truck parking area may suggest a spill in this area. The Virginia Department of Environmental Quality (DEQ) guidelines specify a "level of concern" for TPH concentrations in soils in excess of 100 mg/kg.

The presence of PCB in the truck wash area may only reflect a surface impact from wash operations, and because PCBs were not detected elsewhere on the site, suggest a localized situation.

5.2.2 *Ground Water*

As previously mentioned, four ground water monitoring wells were in place at the site during the time of operation of the facility by Belpar. These wells are identified on Figure 4 as "AB-"; three of these wells have since been abandoned. Historical analytical data obtained from these monitoring wells in 1991 are summarized on Table 2. The results show high levels of iron (399 to 696 mg/L) in samples from AB-1. The concentration of halogenated organics (TOX) in samples from this well (185 µg/L) was also higher than in the other ground water samples. The pH of the ground water in all of these monitoring wells was low, ranging from 4.18 to a high of 6.1. No quality control sample results were available for the 1991 sampling data.

On 5 July 1994, ground water samples were collected from the three newly installed monitoring wells, and the two existing wells (Figure 4). Analytical results of ground water samples submitted to Clean Harbors' laboratory are summarized in Table 1; laboratory data reports are provided in Appendix J. The ground water quality control sample included a trip blank; no VOCs were detected in the trip blank.

During sampling there were no odors or visible signs of petroleum contamination in ground water. In general, the ground water was turbid. Two compounds were detected in samples from the wells: methyl tert-butyl ether (MTBE) and di-n-butyl phthalate. Although di-n-butyl phthalate was not detected in the quality control sample, this compound is a common laboratory contaminant and is ubiquitous in the environment in the form of plastics. The detection of di-n-butyl phthalate at near quantitation limit concentrations is not considered significant.

MTBE, which is a gasoline additive, was detected in two of the five ground water samples (79 µg/L in ground water from MW-2, and 48 µg/L in ground water from the existing supply well). Both of these wells are located downgradient (see Section 5.2.3) near the western edge of the property. There are no known USTs at the Chemical Waste Management site. The Phase I Vista search did not identify any USTs in the Forbes Industrial Park. The use of the facility to treat gasoline-contaminated water/waste, and the location of the wells downgradient of the process area, suggest an on-site source.

MTBE is one of the few compounds in gasoline to contain oxygen, and is generally blended to comprise 2 to 7%. MTBE is very mobile in ground water and has solubility in water of 4.3%, making it an order of magnitude more soluble than other gasoline constituents (i.e., benzene, toluene. ethyl benzene, and xylene, or BTEX). At some sites, it has been found alone at concentrations below 100 µg/l. Where present at higher levels, it co-occurs with BTEX. The presence of MTBE may indicate leaching of this soluble compound into ground water, or may signal the leading edge of a BTEX plume.

5.3 *GROUND WATER FLOW*

Water level measurements were obtained from all five wells on 5 July 1994. Relative ground water elevations are presented in Table 3 and ground water elevation contours are illustrated on Figure 5. The general

direction of ground water flow appears to be toward the south west, in the direction of Blackwater Swamp. The horizontal hydraulic gradient across the site is low and estimated to be about 0.01. ERM notes that a prior study of the site found ground water to flow in the opposite direction.

Table 3 Relative Ground Water Elevations

Well ID.	Ground Surface Elevation (ft)	Top of Well Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft)
MW-1	100.2	102.22	14.29	87.93
MW-2	99.57	99.32	12.8	86.52
MW-3	100.97	101.75	11.27	90.48
Existing Monitor Well	98.79	99.21	7.84	91.37
Existing Supply Well	---	100.02	25.9	74.12

6.0 REGULATORY CONTACTS

RCRA Compliance

On 7 July 1994, ERM spoke with Glen Moore of the Virginia Department of Environmental Quality, Solid Waste Division. When asked about Chemical Waste Management's solid/hazardous waste permits and compliance status, he stated that the Chemical Waste Management site has interim status for receiving TCLP and D001 waste. An inspection a few months ago revealed some violations (most notably the crack in the concrete berm), which were reportedly corrected. He also stated that he had been contacted by Clean Harbors recently.

In a conversation with Jim Saunders on 7 July 1994, more background history of the site was revealed. Originally Mr. Saunders visited the site to investigate Emergency Special Services (ESS). ESS operated in Chester, Virginia (note that this company never operated at this Hopewell location) until they stood trial for two hazardous material discharge incidents. ESS plead guilty to the charges and it was a condition of their sentence that they not deal in hazardous materials for a period of five years. At that time, ESS sold their equipment and transferred their personnel to Belpar, which was then operating at Forbes Industrial Park.

Mr. Saunders went to the site with the intent to interview a former ESS/current Belpar employee supervisor. He toured the site and found no specific violations at the Hopewell location.

Waste Water Discharge

Mr. Robert Steidel of the HRWTF was contacted regarding the compliance status of facility waste water. Mr. Steidel recollected some instances of alleged violation, but which were not formalized.

Reporting Requirements

Mr. Meade Anderson of the Piedmont Regional Office of the DEQ Water Division was contacted regarding reporting requirements for TPH in soils and ground water contamination. He stated that the TPH reporting criterion of 100 ppm TPH associated with UST closures had been widely applied to non-UST incidents. He also stated the he interpreted state law

to have a reporting requirement associated with any finding of ground water contamination, as it was evidence of a release to state waters. ERM raised the point that these requirements were not clear in promulgated regulations, but were DEQ interpretations and were subject to differing legal opinions. Mr. Anderson confirmed that these reporting requirements were often challenged by legal personnel.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Based on the data obtained during this Environmental Site Assessment, the following conclusions are presented:

- The facility has a relatively good compliance record. Issues related to past operators (Belpar) are not associated with this Hopewell location.
- A small amount of nonfriable asbestos was found in vent caulking. Other materials tested negative; however, the roof was not sampled.
- No nearby operations are expected to adversely affect the site.
- Surface soils and ground water underlying the facility have been affected by present or historical site activities. The TPH level of 9,900 mg/kg in surface soils in the truck parking area suggests a possible spill in this area. The presence of MTBE in the ground water appears to be attributable to gasoline waste processing, and may indicate the leading edge of a plume containing other gasoline contaminants (i.e., BTEX). The source of the PCB detected in the truck wash area is unknown.

7.2 RECOMMENDATIONS

ERM presents the following recommendations regarding findings of the ESA:

- Additional sampling in areas of detectable PCBs and high TPH concentrations may enable further delineation of the extent of contamination. Alternatively, surface soils could be removed until no visible contamination remains; sampling could then be conducted to confirm cleanup.
- Although the facility is not regulated by the UST or AST program of the DEQ, the general "level of concern" guideline used by the DEQ for TPH in soils (100 ppm) may warrant consideration with regard to DEQ notification, particularly if it is determined that these concentrations are present in subsurface soils.

- The requirement to report ground water contamination is not clear in state regulations, but in any event rests with the current operator of the facility. ERM recommends further evaluation by legal personnel.

8.0 DISCLAIMER

8.1 SCOPE OF ACTIVITY

This report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based on the facts currently available within the limits of the existing data, scope of work, budget and schedule. To the extent that more definitive conclusions are desired by the client than are warranted by the currently available facts, it is specifically ERM's intent that the conclusions and recommendations stated herein will be intended as guidance and not necessarily a firm course of action except where explicitly stated as such. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS OF THE PROPERTY FOR A PARTICULAR PURPOSE. In addition, the information provided to you in this report is not to be construed as legal advice.

8.2 LIMITATION OF USE OF THIS REPORT

ERM is not engaged in environmental evaluations for the purpose of advertising, sales promotion, or endorsement of any client's interests, including raising investment capital, recommending investment decisions, or other publicity purposes. The client acknowledges this report has been prepared for the exclusive use of client and agrees that ERM's reports or correspondences may not be used or relied upon in any prospectus or offering circular. The client also agrees that none of its advertising, sales promotion, or other publicity matter containing information obtained from this report will make reference to ERM's trade name.

The information contained in this document is confidential and proprietary in nature, and no distribution of this document may be made without the prior, written consent of Clean Harbors, Inc.

Nothing contained in this report shall be construed as a warranty or affirmation by ERM that the site and property described in the report are suitable collateral for any loan or that acquisition of such property by any

lender through foreclosure proceedings or otherwise will not expose the lender to potential environmental liability.

Appendix A
Site Photographs

Site Photographs

Photo Number	Description
1	North Side of Building, Including Truckwash Area and Supply Well
2	Tool Crib Under Loft
3	Laboratory
4	Tank Farm Showing Building and Truck Ramp
5	Taped Hoses on Berm Floor
6	Chemical Storage, Southern Wall
7	Shelving, Northern Wall
8	Transformers; Note Grey Color

Photo 1

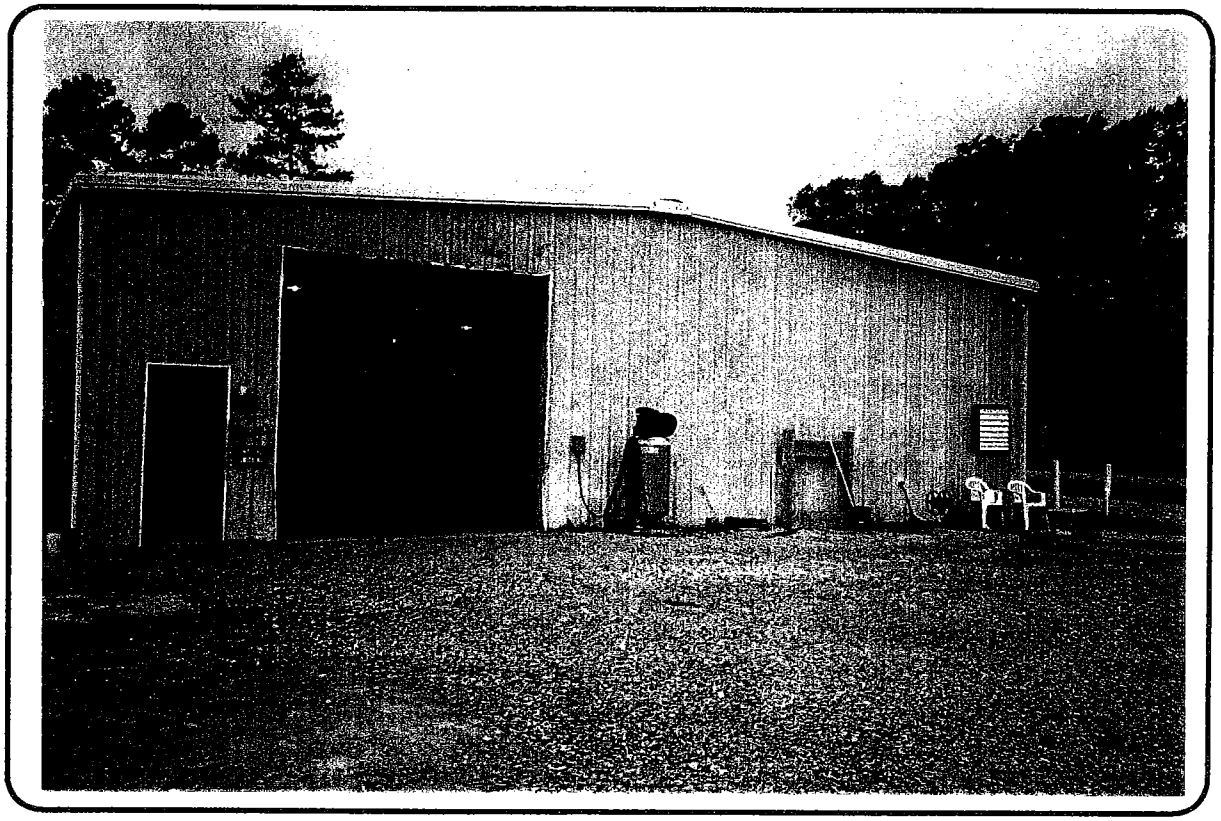
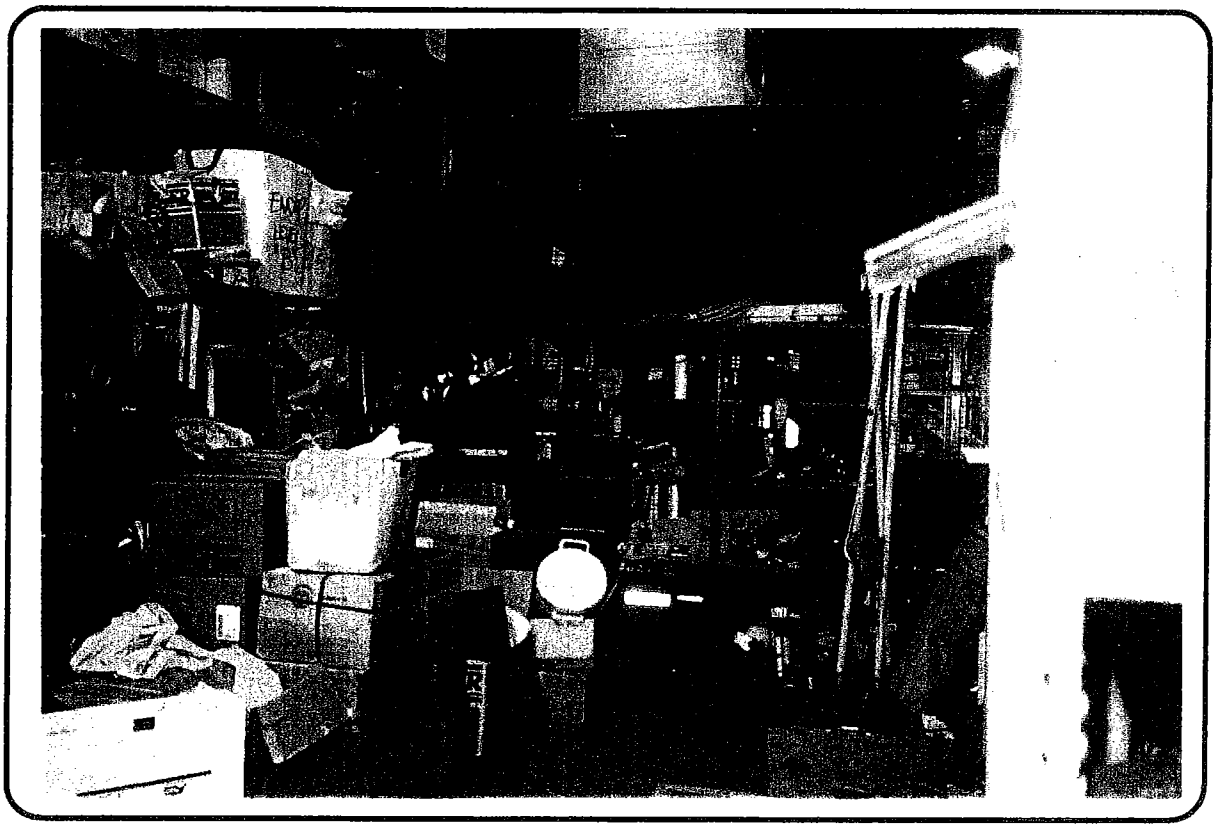


Photo 2



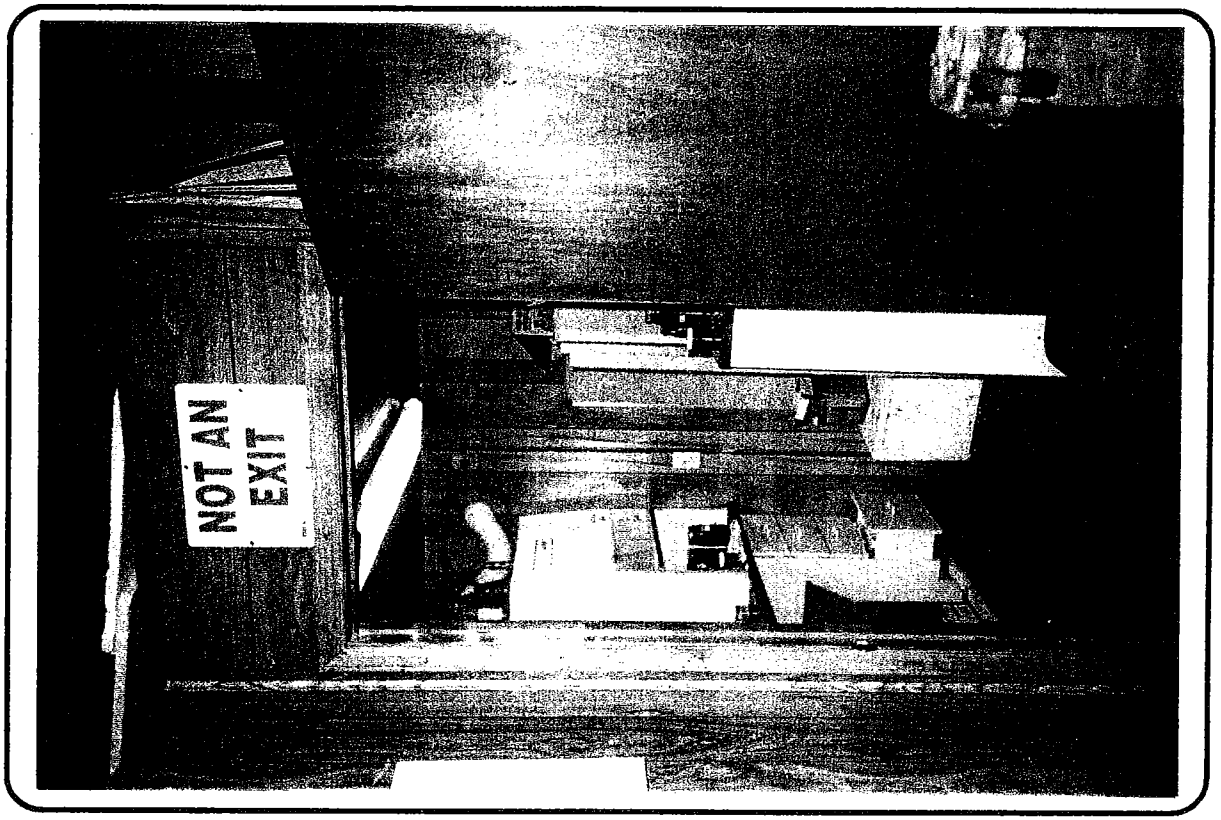


Photo 3

Photo 4

Photo 5

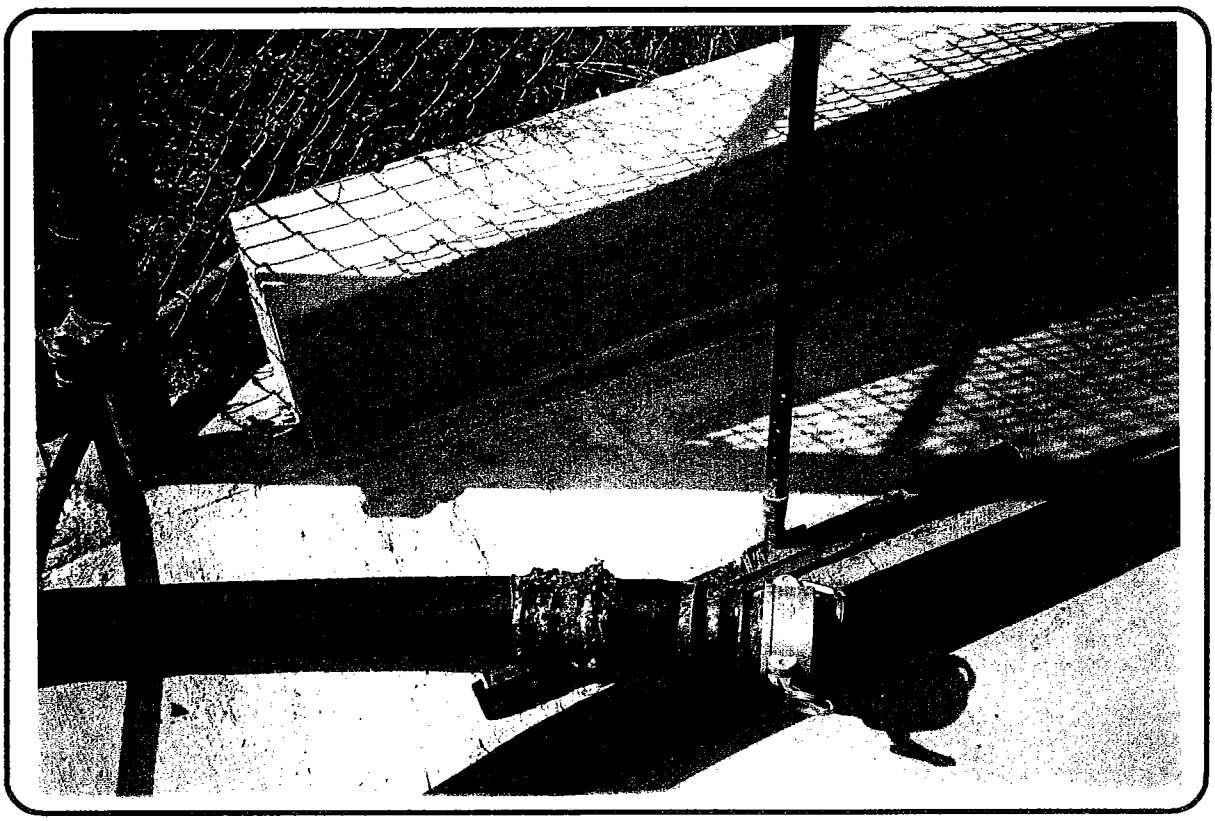


Photo 6

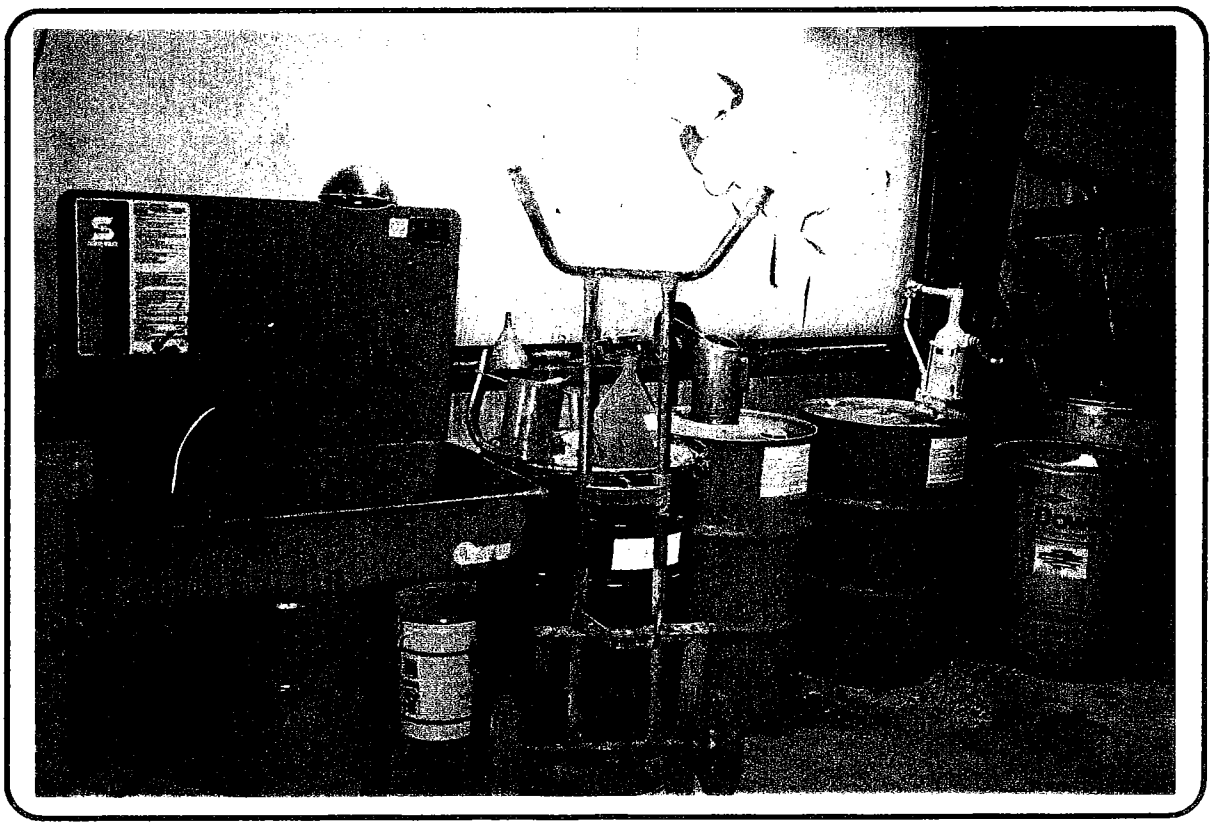
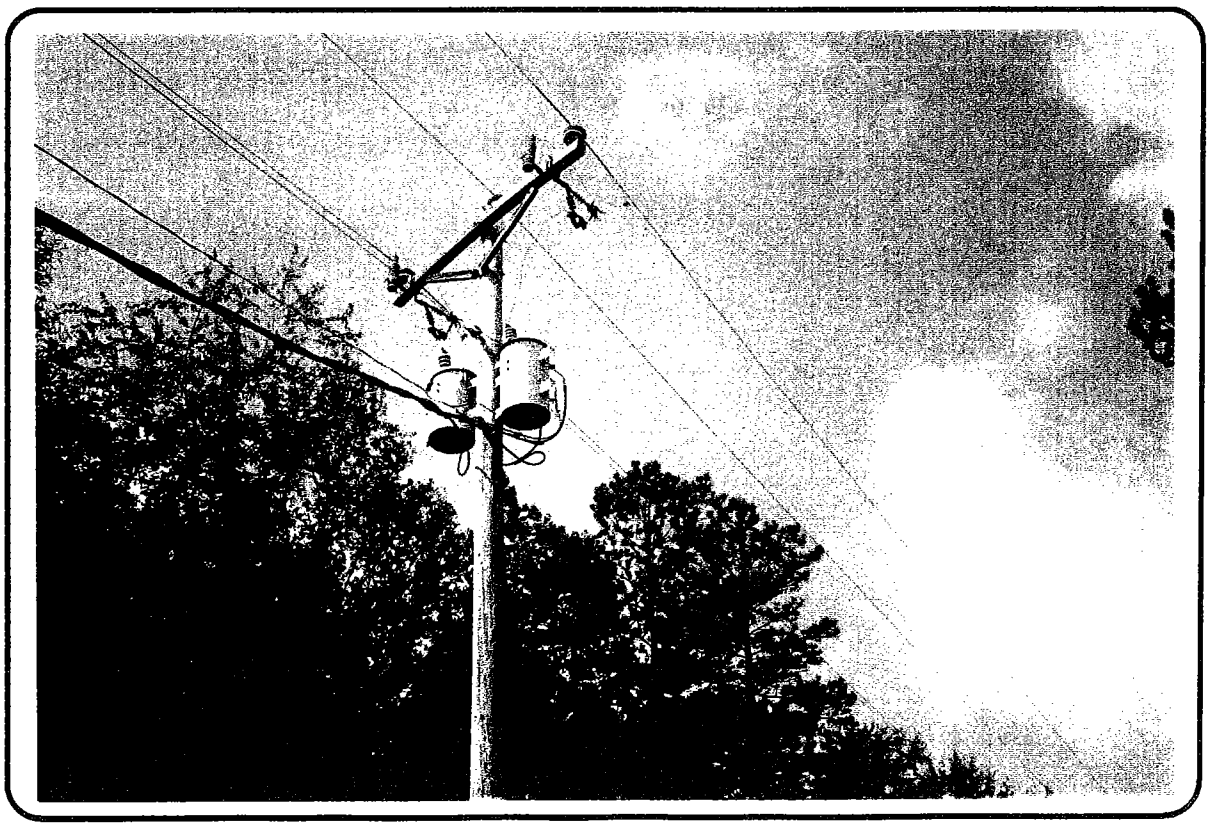


Photo 7

Photo 8



Appendix B
RCRA Part A Permit Application

Chemical Waste Management, Inc.
Technical Services Division
P. O. Box 757
Hopewell, Virginia 23860
804-452-1750 FAX: 804/458-6192

September 13th, 1993

Mr. Russ McAvoy
Virginia Department of Environmental Quality
Hazardous Waste Facility Permitting
Monroe Building
101 North 14th Street
Richmond, VA 23219
(hand delivered)

Mr. Robert L. Allen, Chief
RCRA Programs Branch
United States Environmental Protection Agency
Region III
841 Chestnut Street
Philadelphia, PA 19107
(certified mail)

RE: CWM Hopewell Facility (VAD988175055)

Gentlemen,

Enclosed please find an updated form 8700-23 Part A application and an updated form 8700-12 Notification of Hazardous Waste Activity for our Hopewell, Virginia facility. The updating of these forms reflects several changes in the personnel operating the facility and organizational changes within Chemical Waste Management. The facility is upgrading it's tank storage area by replacing the 10,000 gallon and 5,000 gallon tanks with one, new 15,000 gallon tank. Auxiliary equipment such as the oil/water separator and the carbon adsorption units have been replaced with newer units. Please note that the tank storage capacity has not increased and remains 15,000 gallons.

As you know our facility accepts mixtures of water and petroleum products (gasoline, diesel etc.) for separation and adsorption. Once separated, these wastes are sent off-site for energy recovery or disposal. Should you have any questions regarding our facility or this submission, please contact me at 609-243-7947.

Sincerely,

Dave Swiney

Dave Swiney
Chemical Waste Management, Inc.

Northern Region (East)
Environmental Manager

cc: Doug Martin
Andrew Flanagan
Charlie Bias
John Andrews

Form Approved. OMB No. 2060-0028, expires 6-31-93
GSA No. 02-46-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

EPA Notification of Regulated Waste Activity

United States Environmental Protection Agency

Date Received (For Official Use Only)

I. Installation's EPA ID Number (*Mark 'X' in the appropriate box*)

[ ] A. First Notification [X] B. Subsequent Notification (*complete item C*)

C. Installation's EPA ID Number: VAD988175055

II. Name of Installation (*Include company and specific site name*)

CWM HOPEWELL FACILITY

III. Location of Installation (*Physical address not P.O. Box or Route Number*)

Street: 7515 HARVEST ROAD

Street (continued):

City or Town: PRINCE GEORGE

State: VA

ZIP Code: 23875-

County Code:

County Name: PRINCE GEORGE

IV. Installation Mailing Address (*See instructions*)

Street or P.O. Box: PO BOX 757

City or Town: HOPEWELL

State: VA

ZIP Code: 23860-

V. Installation Contact (*Person to be contacted regarding waste activities at site*)

Name (*last*): ANDREWS

(*first*): JOHN

Job Title: FACILITY MGR

Phone Number (*area code and number*): 804-452-1750

VI. Installation Contact Address (*See instructions*)

A. Contact Address Location: [ ] Mailing: [X]

B. Street or P.O. Box:

City or Town:

State:

ZIP Code:

VII. Ownership (*See instructions*)

A. Name of Installation's Legal Owner: CHEMICAL WASTE MANAGEMENT INC

Street, P.O. Box, or Route Number: 3001 BUTTERFIELD ROAD

City or Town: OAKBROOK

State: IL

ZIP Code: 60521-

Phone Number (*area code and number*): 708-218-1500

B. Land Type: P

C. Owner Type: P

D. Change of Owner Indicator: Yes [ ] No [X]

(Date Changed) Month Day Year

Continue on reverse

Form Approved. OMB No. 2050-0028. Expires 6-31-93
GSA No. 0246-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

ID - For Official Use Only

VIII. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes. Refer to instructions.)

A. Hazardous Waste Activity

1. Generator (See instructions)
   - [X] a. Greater than 1000kg/mo (2,200 lbs.)
   - [ ] b. 100 to 1000 kg/mo (220 – 2,200 lbs.)
   - [ ] c. Less than 100 kg/mo (220 lbs.)
2. Transporter (indicate Mode in boxes 1-5 below)
   - [ ] a. For own waste only
   - [XX] b. For commercial purposes

   Mode of Transportation
   - [ ] 1. Air
   - [ ] 2. Rail
   - [X] 3. Highway
   - [ ] 4. Water
   - [ ] 5. Other – specify
3. [X] Treater, Storer, Disposer (at installation) Note: A permit is required for this activity; see instructions.
4. Hazardous Waste Fuel
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Marketers
   - [ ] c. Boiler and/or Industrial Furnace
     - [ ] 1. Smelter Deferral
     - [ ] 2. Small Quantity Exemption

     Indicate Type of Combustion Device(s)
     - [ ] 1. Utility Boiler
     - [ ] 2. Industrial Boiler
     - [ ] 3. Industrial Furnace
5. [ ] Underground Injection Control

B. Used Oil Fuel Activities

1. Off-Specification Used Oil Fuel
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Marketer
   - [ ] c. Burner – indicate device(s) – Type of Combustion Device
     - [ ] 1. Utility Boiler
     - [ ] 2. Industrial Boiler
     - [ ] 3. Industrial Furnace
2. [ ] Specification Used Oil Fuel Marketer (or On-site Burner) Who First Claims the Oil Meets the Specification

IX. Description of Regulated Wastes (Use additional sheets if necessary)

A. Characteristics of Nonlisted Hazardous Wastes. Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. (See 40 CFR Parts 261.20 - 261.24)

1. Ignitable (D001)	2. Corrosive (D002)	3. Reactive (D003)	4. Toxicity Characteristic (D000)	List specific EPA hazardous waste number(s) for the Toxicity characteristic contaminant(s)	
X	X		X	D008 D018	

B. Listed Hazardous Wastes. (See 40 CFR 261.31 - 33. See instructions if you need to list more than 12 waste codes.)

1	2	3	4	5	6
7	8	9	10	11	12

C. Other Wastes. (State or other wastes requiring a handler to have an I.D. number. See instructions.)

1	2	3	4	5	6

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Name and Official Title (type or print)	Date Signed
[illegible]	Area General Manager	Sept. 14, 1993

XI. Comments

Owner of Property Mr. A.A. Forbes (804) 458-8870

4003 Pfost Ave

Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

ase print or type with ELITE type (12 characters per inch) in the unshaded areas only

For EPA Regional Use Only

EPA

United States Environmental Protection Agency
Washington, DC

Hazardous Waste Permit Application Part A

Date Received
Month Day Year

I. ID Numbers

A. EPA ID Number

V A D 9 8 8 1 7 5 0 5 5

II. Name of Facility

C W M H O P E W E L L F A C I L I T Y

III. Facility Location (Physical address, not P.O. Box or Route Number)

A. Street

7 5 1 5 H A R V E S T R O A D

Street (continued)

City or Town

P R I N C E G E O R G E

State

V A 2 3 8 7 5 -

County Code (if known)

County Name

P R I N C E G E O R G E

B. Land Type (enter code)

P

C. Geographic Location

LATITUDE (degrees, minutes, & seconds)

3 7 1 5 0 2 3

LONGITUDE (degrees, minutes, & seconds)

0 7 7 1 6 0 0 1

D. Facility Existence Date

Month Day Year

0 9 0 1 1 9 8 9

IV. Facility Mailing Address

Street or P.O. Box

P O B O X 7 5 7

City or Town

H O P E W E L L

State

V A 2 3 8 6 0 -

V. Facility Contact (Person to be contacted regarding waste activities at facility)

Name (last)

A N D R E W S

(first)

J O H N

Job Title

F A C I L I T Y M N G R

Phone Number (area code and number)

8 0 4 - 4 5 2 - 1 7 5 0

VI. Facility Contact Address (See Instructions)

A. Contact Address Location

Mailing

X

B. Street or P.O. Box

City or Town

State

ZIP Code

Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA ID Number (Enter from page 1)

V A D 9 8 8 1 7 5 0 5 5

VII. Operator Information (see instructions)

Name of Operator

C H E M I C A L W A S T E M A N A G E M E N T I N C

Street or P.O. Box

1 0 0 N A S S A U P A R K B L V D

City or Town

P R I N C E T O N N J 0 8 5 4 0 -

Phone Number

6 0 9 - 2 4 3 - 7 8 0 0 P X

VIII. Facility Owner (see instructions)

A. Name of Facility Owner

C H E M I C A L W A S T E M A N A G E M E N T I N C

Street or P.O. Box

3 0 0 1 B U T T E R F I E L D R O A D

City or Town

O A K B R O O K I L 6 0 5 2 1 -

Phone Number

- 0 8 - 2 1 8 - 1 5 0 0 P X

IX. SIC Product Information

9 9 9 9	(description) HAZARDOUS WASTE TREATER	(description)
	(description)	(description)

X. Other Environmental Operations (see instructions)

A. Permit Type (enter code)

R	I L D 0 9 9 2 0 2 6 8 1 1	TRANSPORTER PERMIT

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GSA No. 0246-FPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

V	A	D	9	8	8	1	7	5	0	5	5

XI. Nature of Business (provide a brief description)

THE HOPEWELL FACILITY ACCEPTS AND PROCESSES MIXTURES OF WASTE PETROLEUM PRODUCTS (GASOLINE, DEISEL, ETC.) AND WATER. WASTE MIXTURES ARE HELD IN A STORAGE TANKS, TREATED BY MEANS OF SEPARATION AND ABSORPTION, AND THEN SENT OFF_SITE FOR DISPOSAL OR RECOVERY.

XII. Process Codes and Design Capacities

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	DISPOSAL:	
D79	INJECTION WELL	GALLONS; LITERS; GALLONS PER DAY; OR LITERS PER DAY
D80	LANDFILL	ACRE-FEET OR HECTARE-METER
D81	LAND APPLICATION	ACRES OR HECTARES
D82	OCEAN DISPOSAL	GALLONS PER DAY OR LITERS PER DAY
D83	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	STORAGE:	
S01	CONTAINER (barrel, drum, etc.)	GALLONS OR LITERS
S02	TANK	GALLONS OR LITERS
S03	WASTE PILE	CUBIC YARDS OR CUBIC METERS
S04	SURFACE IMPOUNDMENT	GALLONS OR LITERS
	TREATMENT:	
T01	TANK	GALLONS PER DAY OR LITERS PER DAY
T02	SURFACE IMPOUNDMENT	GALLONS PER DAY OR LITERS PER DAY
T03	INCINERATOR	SHORT TONS PER HOUR; METRIC TONS PER HOUR; GALLONS PER HOUR; LITERS PER HOUR; OR BTU'S PER HOUR
T04	OTHER TREATMENT (Use for physical, chemical, thermal or biolgical treatment processes not occurring in tanks, surface impoundment or incinerators. Describe the processes in the space provided in Item XIII.)	GALLONS PER DAY; LITERS PER DAY; POUNDS PER HOUR; SHORT TONS PER HOUR; KILOGRAMS PER HOUR; METRIC TONS PER DAY; METRIC TONS PER HOUR; OR SHORT TONS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
GALLONS PER HOUR	E
GALLONS PER DAY	U
LITERS	L
LITERS PER HOUR	H
LITERS PER DAY	V
SHORT TONS PER HOUR	D
METRIC TONS PER HOUR	W
SHORT TONS PER DAY	N
METRIC TONS PER DAY	S
POUNDS PER HOUR	J
KILOGRAMS PER HOUR	R
CUBIC YARDS	Y
CUBIC METERS	C
ACRES	B
ACRE-FEET	A
HECTARES	Q
HECTARE-METER	F
BTU's PER HOUR	K

Form Approved. OMB No. 2050-0034 Expires 12-31-9[illegible]
GSA No. 0248-EPA-O[illegible]

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (enter from page 1)

C	A	D	9	8	8	1	7	5	0	5	5

XII. Process - Codes and Design Capacities (continued)

EXAMPLE FOR COMPLETING ITEM XII [illegible] hold 200 gallons and the other can hold 400 gallons [illegible]

Line Number	A. Process Code			B. Process Design Capacity: 1. Amount (specify)	2. Unit of Measure	C. Process Total Number of Units		
[illegible]	S	0	2	15,000	G	0	0	1
[illegible]	T	0	1	1,500	E	0	0	1

NOTE: If you need to list more than 12 process codes, attach an additional sheet [illegible] above. Number the lines sequentially, taking into account any lines [illegible]

XIII. Additional Treatment Processes (follow instructions from item XII)

Line Number	A. Process Code	B. Treatment Process Design Capacity: 1. Amount (specify)	2. Unit of Measure (enter code)	C. Process Total Number of Units	D. Description of Process

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GSA No. 0248-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (enter from page 1)

V	A	D	9	8	8	1	7	5	0	5	5

XIV. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER ... you will handle ... hazardous waste ... describe ...

B. ESTIMATED ANNUAL QUANTITY ... handled on an annual basis ... all the [illegible] waste(s) that will be handled ...

C. UNIT OF MEASURE — For each quantity entered in column ... and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity ... converted into one of the required units of measure taking into account the appropriate density or ...

D. PROCESSES

1. PROCESS CODES:

[illegible]

2. PROCESS DESCRIPTION: ...

[illegible]

EXAMPLE FOR COMPLETING ... estimated 900 pounds per year of ... dispose of three ... The other waste is corrosive and ... incinerator and disposal will be ...

Line Number		A. EPA Hazardous Waste No. (enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Processes	E. Process Description
X	1	K	0	[illegible]	[illegible]	900	[illegible]	[illegible]	[illegible]
X	2	D	0	0	[illegible]	400	[illegible]	[illegible]	[illegible]
X	3	D	0	0	[illegible]	100	[illegible]	[illegible]	Included With Above

Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number

V	A	D	9	8	8	1	7	5	0	5	5

XIV. Description of Hazardous Waste

D	0	1	8	1,200	T	S	0	2	T	0	1				
D	0	0	1	1,200	T	S	0	2	T	0	1				
D	0	0	2	1,200	T	S	0	2	T	0	1				
D	0	0	8	1,200	T	S	0	2	T	0	1				

Form Approved. OMB No. 2050-0034 Expires 12-31-91
GSA No. 0246-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (enter from page 1): V A D 9 8 8 1 7 5 0 5 5

Secondary ID Number (enter from page 1):

XIV. Description of Hazardous Waste (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 6.

Line Number	Additional Process Codes (enter)

XV. Map

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature: [signature]

Date Signed: Sept. [illegible] 1993

Name and Official Title (type or print): Andrew Flanagan Chemical Waste Management - Mid - Atlantic Service Area General Manager

Operator Signature: [illegible]

Date Signed:

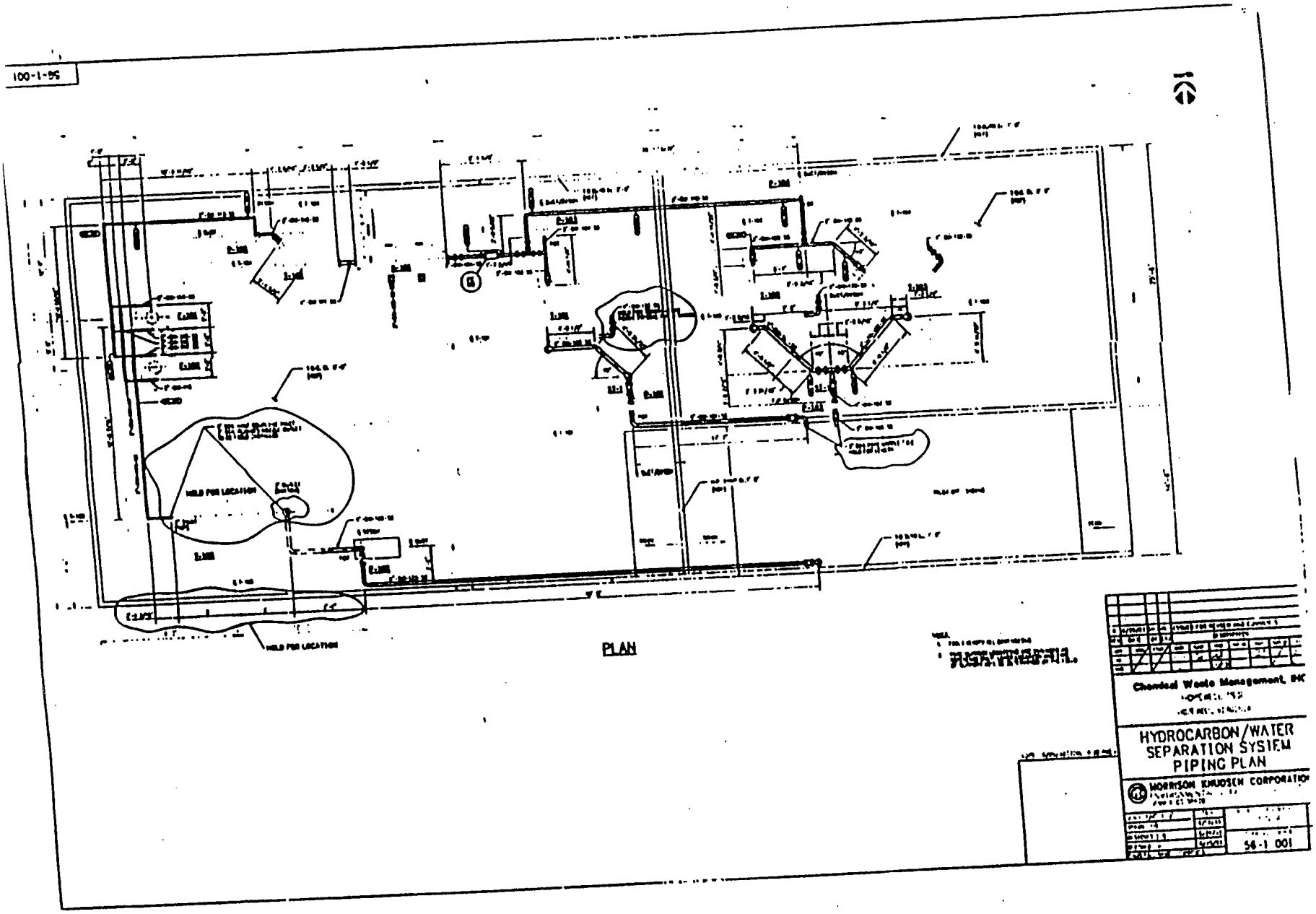
Name and Official Title (type or print):

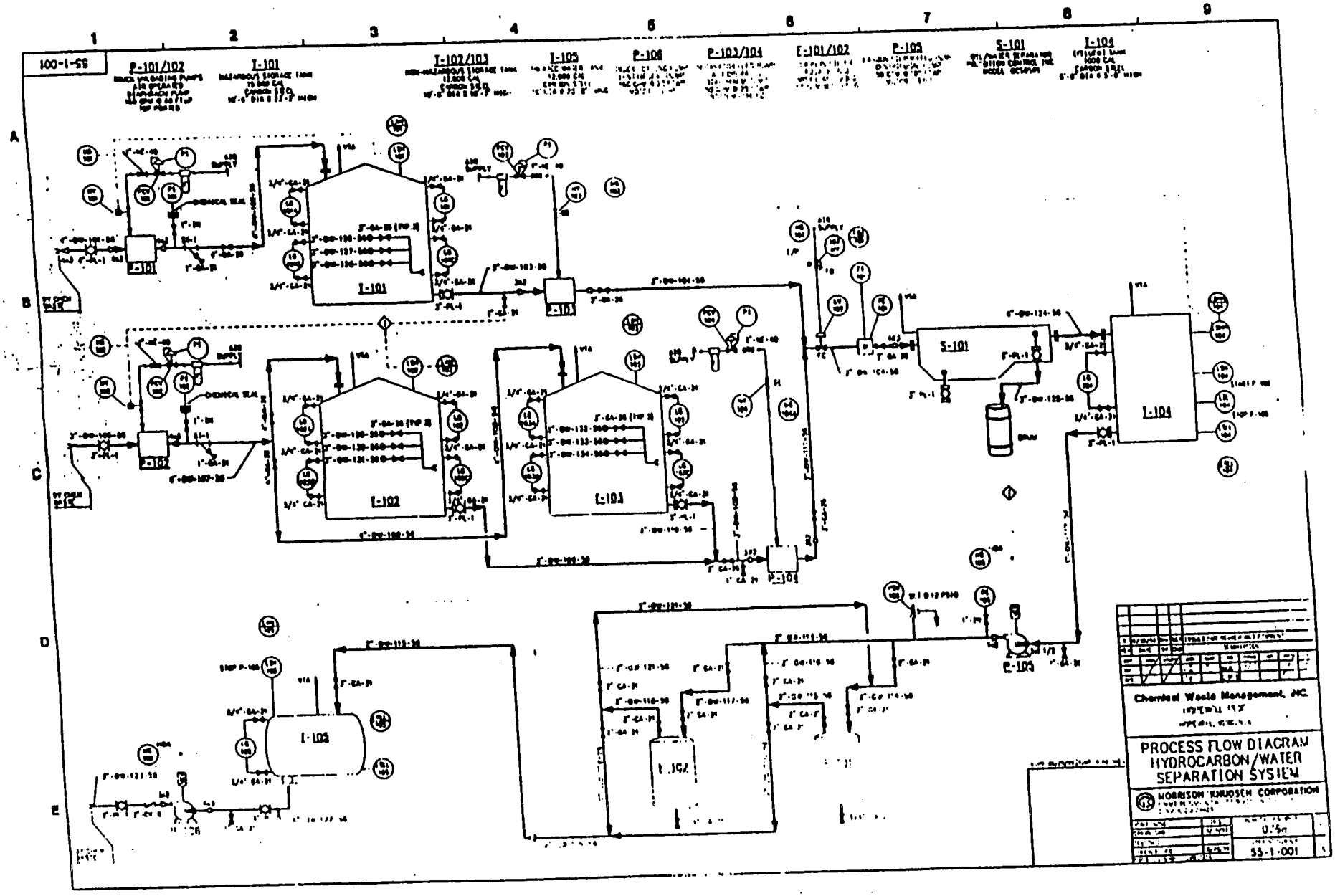
XIX. Comments

Owner of Property

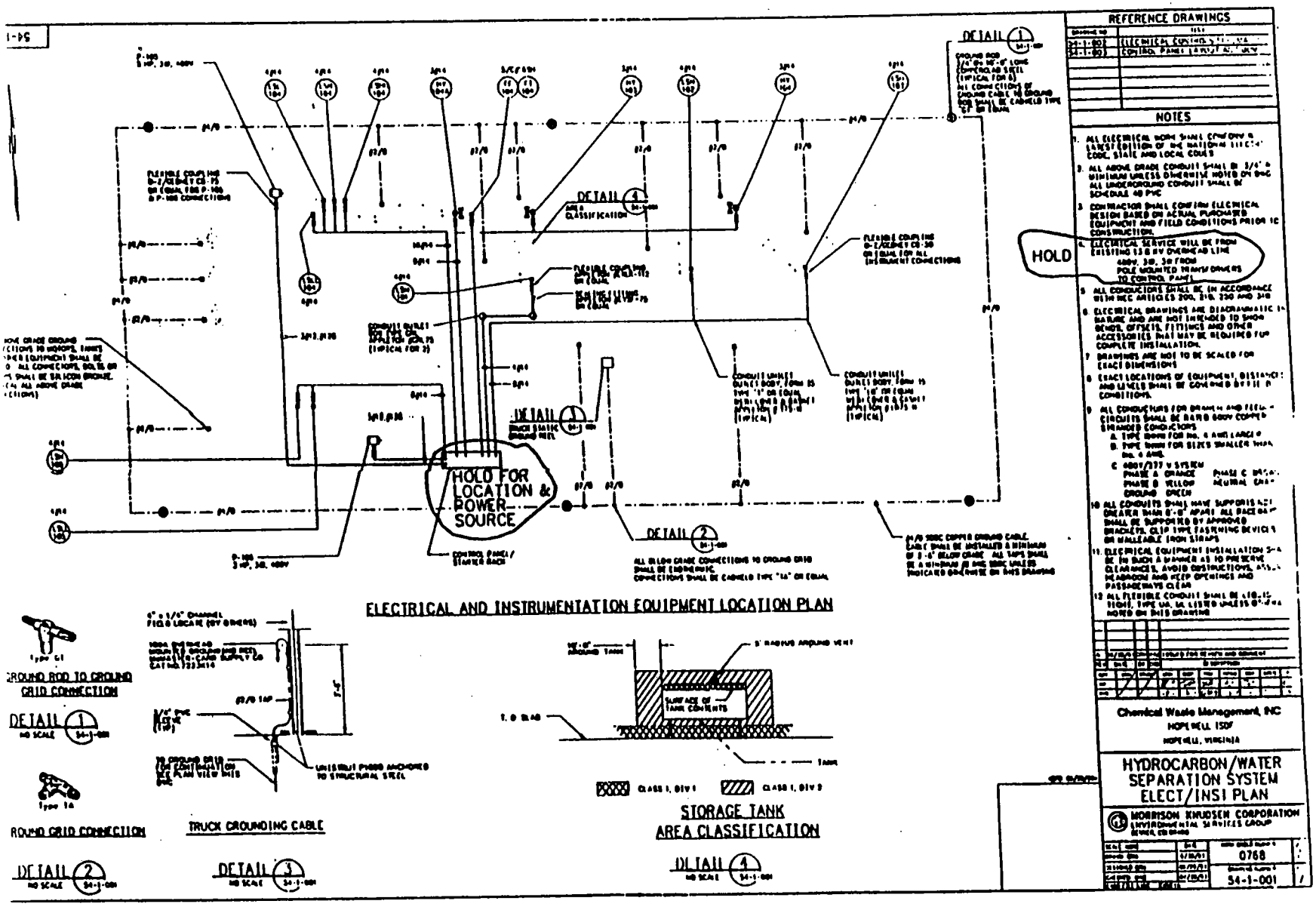
A.A. Forbes
4003 Pfost Ave.
Prince George, VA 23875
(804) 458-8870

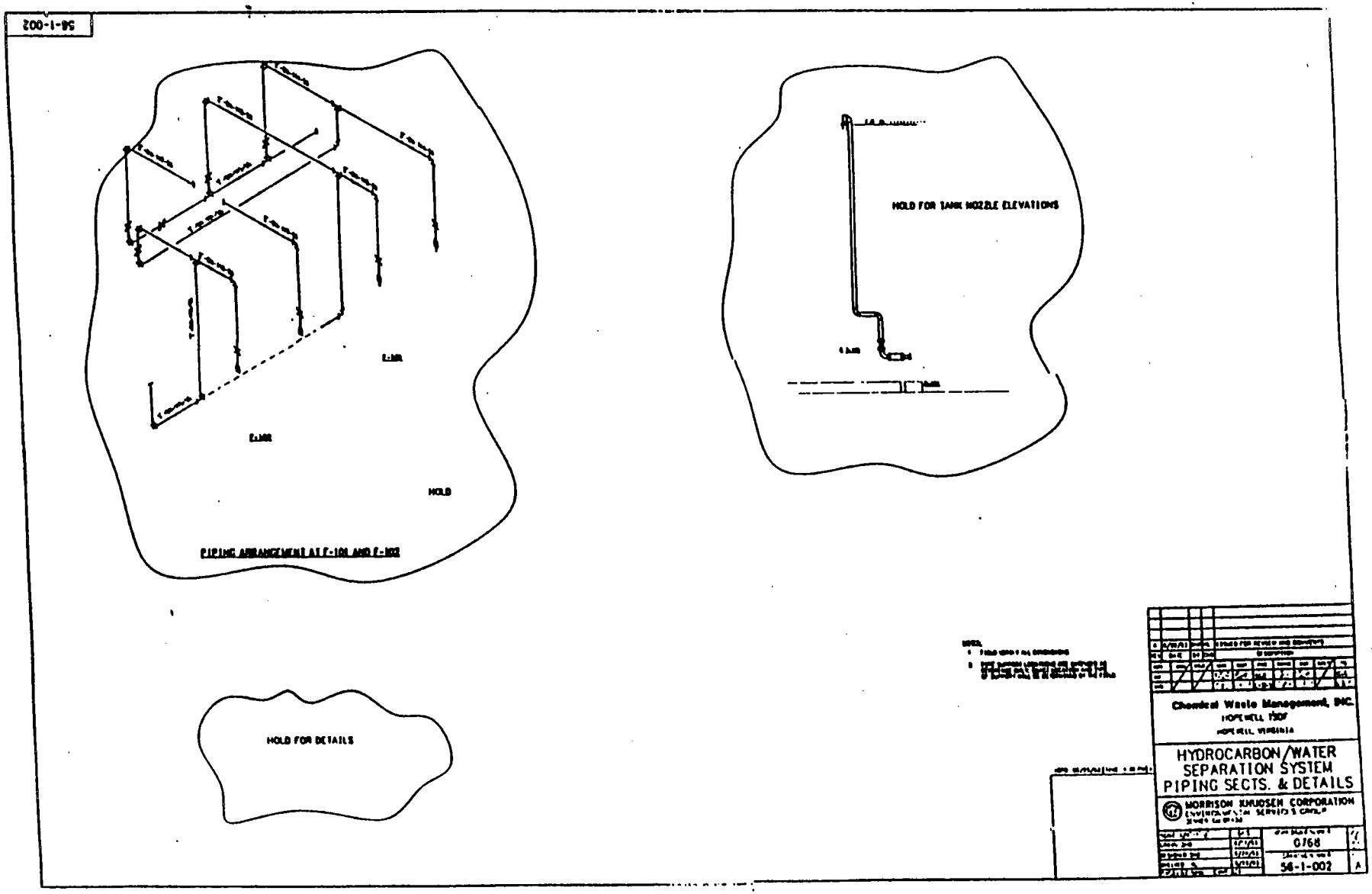
[illegible] EPA Regional or State Office. (refer to instructions for more information)


HOLD FOR LOCATION
HOLD FOR LOCATION
PLAN
Chemical Waste Management, INC
HYDROCARBON/WATER
SEPARATION SYSTEM
PIPING PLAN
MORRISON KNUDSEN CORPORATION
56-1 001



55-1-001
P-101/102
T-101
T-102/103
T-105
P-106
P-103/104
E-101/102
P-105
S-101
T-104
Chemical Waste Management, INC.
PROCESS FLOW DIAGRAM
HYDROCARBON/WATER
SEPARATION SYSTEM
MORRISON KNUDSEN CORPORATION
55-1-001


HOLD FOR LOCATION & POWER SOURCE
HOLD
DETAIL 1
DETAIL 2
DETAIL 3
DETAIL 4
ELECTRICAL AND INSTRUMENTATION EQUIPMENT LOCATION PLAN
GROUND ROD TO GROUND GRID CONNECTION
TRUCK GROUNDING CABLE
STORAGE TANK AREA CLASSIFICATION
REFERENCE DRAWINGS
NOTES
Chemical Waste Management, INC
HOPEWELL 1507
HOPEWELL, VIRGINIA
HYDROCARBON/WATER SEPARATION SYSTEM ELECT/INSI PLAN
MORRISON KNUDSEN CORPORATION
0768
54-1-001


56-1-002
HOLD
PIPING ARRANGEMENT AT F-101 AND F-102
HOLD FOR TANK NOZZLE ELEVATIONS
HOLD FOR DETAILS
Chemical Waste Management, INC.
HOPEWELL 1307
HOPEWELL, VIRGINIA
HYDROCARBON/WATER
SEPARATION SYSTEM
PIPING SECTS. & DETAILS
MORRISON KNUDSEN CORPORATION
0768
56-1-002
A

Appendix C
Industrial WastewaterPermit and Legal Evaluation

The City of Hopewell, Virginia

Hopewell Regional Wastewater Treatment Facility

P.O. Box 969 • Hopewell, Virginia 23860 • (804) 541-2210

November 2, 1993

John Andrews
Facility Manager
Chemical Waste Management/Belpar District
7500 Harvest Road
Prince George, Virginia 23375

Re: Indirect Industrial Wastewater Discharge Permit

Dear Mr. Andrews:

Attached is the new indirect industrial wastewater discharge permit for your facility. Also enclosed is a copy of the new discharge monitoring form for your facility. Please note that the following changes have been made to the sampling and analysis requirements for your facility effective with the issuance date of the permit:

1. The discharge monitoring report is to be submitted monthly.

2. TCLP is to be determined and reported quarterly on a composite of pretreated wastewaters hauled to the Regional Plant for treatment.

3. pH is to be determined and reported on each dump.

4. Flash point is to be determined and reported on each dump.

5. Discharge flow is to be recorded and reported on a daily basis.

As we have previously discussed, I will send you a copy of the legal opinion received by this facility concerning the treatment of your wastewaters when I receive the invoice for the work. I will include the cost for this opinion on an upcoming wastewater treatment bill.

If you have any further questions or comments concerning this permit, please do not hesitate to contact me.

Sincerely,

Robert C. Steidel

Robert C. Steidel
Environmental Manager

The City of Hopewell, Virginia

Hopewell Regional Wastewater Treatment Facility

P.O. Box 969 • Hopewell, Virginia 23860 • (804) 541-2210

WASTEWATER HAULER DISCHARGE PERMIT

CHEMICAL WASTE MANAGEMENT/BELPAR DISTRICT
7500 Harvest Road
Prince George, Virginia 23875

is hereby authorized to discharge pretreated wastewaters from the industrial pretreatment facility in Prince George County for wastes consisting of petroleum/water mixtures generated from the washing and cleaning of petroleum underground storage tanks ("USTs") at the HOPEWELL REGIONAL WASTEWATER TREATMENT FACILITY discharge station. These pretreated wastewaters shall comply with all applicable pretreatment standards. Discharge will take place as directed by the operator in charge at the treatment plant.

CHEMICAL WASTE MANAGEMENT/BELPAR DISTRICT must use the manifest form provided by HRWTF for each load of pretreated wastewater hauled to this facility for treatment. The current treatment cost for this wastewater for the duration of this permit is $ 0.10 (10 cents) per gallon delivered and is subject to change by action of City of Hopewell City Council.

CHEMICAL WASTE MANAGEMENT/BELPAR DISTRICT will monitor the pretreated wastewater for select pollutant characteristics. Those pollutant characteristics are shown on the **Discharge Monitoring Report** for CHEMICAL WASTE MANAGEMENT/BELPAR DISTRICT and attached to this permit. The **Discharge Monitoring Report** will be completed by CHEMICAL WASTE MANAGEMENT/BELPAR DISTRICT each month. The results will be submitted to the address below by the 10th of the month for the preceding month.

Hopewell Regional Wastewater Treatment Facility
P.O. Box 969
Hopewell, Virginia 23860
Attention: Environmental Manager

Sampling and analysis at a frequency different than the last permit issued to this facility is to begin with the issuance of this permit.

This authority to discharge pretreated wastewater is granted until August 1, 1994 and is subject to revocation at the discretion of the HRWTF Director.

Approved:

Mark A. Haley
Director
Hopewell Regional Wastewater Treatment Facility
November 2, 1993
Permit Number: 0600

cc: Operations Manager

Hopewell Regional Wastewater Treatment Facility, Wastewater Discharge Monitoring Report

For: Chemical Waste Management/Belpar District, 7500 Harvest Road, Prince George, Virginia 23875

Reporting Month: _____ Year: 199 _____ HRWTF Permit Number: 0600

HRWTF Agreement Conditions

Pollutant		Loading		Units	Concentration			Units	Number of Excursions	Sampling Frequency	Sample Type	Detection Limit	Number of Samples Collected
		Monthly Total	Daily Maximum		Minimum	Monthly Average	Maximum						
TOC	Reported							ppm					
	Permitted									Monthly	Grab		
TPH	Reported							ppm					
	Permitted									Monthly	Grab		
TCLP	Reported				Attach Complete Results from Laboratory								
	Permitted				Attach Complete Results from Laboratory					Quarterly	Composite		

Note: TCLP Composite shall be made up of all loads hauled to the Regional Plant for disposal on a given calendar day representative of normal wastewater quality and strength.

HRWTF Permit Conditions

pH	Reported			Units				Units					
	Permitted			Units	>5			Units		Each dump	Grab		
Flash Point	Reported							ppm					
	Permitted				>140					Each dump	Grab		

Dates of treated wastewater discharge to the Regional Plant.

Date	Amount (gallons)	Date	Amount (gallons)	Date	Amount (gallons)	Date	Amount (gallons)	Date	Amount (gallons)	Date	Amount (gallons)	Date	Amount (gallons)
1		6		11		16		21		26		31	
2		7		12		17		2		27			
3		8		13		18		23		28			
4		9		14		19		24		29			
5		10		15		20		25		30			

Name of Plant Manager: John Andrews

I certify that under penalty of law that this document and all attachemnts were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information sumbitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalities for submitting false information, including the possibilty of fine and imprisonment for knowing violations.

Signature of General Manager (Duly Authorized Representative) _____ Date _____

Signature of Chief Technical Representative _____ Date _____

Privileged and Confidential
Attorney-Client Privilege

MEMORANDUM

TO: Mr. Mark A. Haley
Director, Hopewell Regional
Wastewater Treatment Facility
Mr. Robert C. Steidel
Environmental Manager, Hopewell
Regional Wastewater Treatment Facility

DATE: October 13, 1993

FROM: Eric A. DeGroff

FILE: 35204.000003

HOPEWELL REGIONAL WASTEWATER TREATMENT FACILITY

Regulatory Status and Effect of Wastewater Received From Chemical Waste Management, Inc. Pretreatment Facility

Chemical Waste Management, Inc. ("CWMI") operates an industrial pretreatment facility in Prince George County for wastes consisting of petroleum/water mixtures generated from the washing and cleaning of petroleum underground storage tanks ("USTs"). CWMI claims that these mixtures sometimes are characteristically hazardous due to ignitability (D001 wastes) and/or to toxicity resulting generally from the presence of benzene (D018 wastes).[1] The mixtures initially are placed in a holding tank at the CWMI facility, where the water fraction is decanted off. The decanted water fraction then undergoes a pretreatment process described by CWMI as oil/water separation, filtration and carbon absorption. The wastewater from this pretreatment process is trucked to the Hopewell Regional Wastewater Treatment Facility ("HRWTF") for final treatment. It is discharged

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[1] Letter from Mr. John Andrews, CWMI Facility Manager, to Mr. Robert Steidel, Environmental Manager, Hopewell Regional Wastewater Treatment Facility, at 1 (Sept. 8, 1993).

into the Facility, at the discretion of HRWTF personnel, at either the bar screen chamber or the primary clarifier channel. CWMI states that the pretreated wastewater trucked to the HRWTF does not exhibit any hazardous characteristic and is therefore not a hazardous waste.[2]

You have asked for our help in determining: (1) whether CWMI's statement that the pretreated wastewater is *not* a hazardous waste is correct from a regulatory standpoint; and (2) whether the HRWTF is in any danger of being ruled a hazardous waste treatment facility by accepting CWMI's pretreated wastewater. In response to your questions, we have reviewed the applicable federal and Virginia laws and regulations, preamble discussions concerning the application of those regulations, and relevant EPA guidance documents. In analyzing the issues you presented we have assumed the following:

1. that the waste processed by CWMI is not a listed hazardous waste; and
2. that CWMI is accurate in its assertion that the pretreated wastewater trucked to HRWTF does not exhibit any hazardous characteristic.[3]

CONCLUSIONS

We have determined that CWMI is correct in its assertion that the wastewater it discharges to the HRWTF is not a hazardous waste. The wastewater is not specifically listed as a hazardous waste in either the Virginia or federal regulations; it does not exhibit any hazardous characteristic; and, because it is derived from the treatment of a characteristic,

---

[2] *Id.* at 2.

[3] Please let us know if you would like us to evaluate the regulatory impact of any alternative set of facts or assumptions.

rather than a listed, waste it is not considered hazardous under the so-called "derived-from" rule, which is discussed below.

Because the pretreated wastewater discharged into the HRWTF by CWMI is not a hazardous waste, the Facility is not in danger of being considered a hazardous waste management facility by virtue of accepting and treating the wastewater. The definition of "hazardous waste management facility" in the Virginia Hazardous Waste Management Regulations is restricted to "land and structures . . . used to treat . . . *hazardous* waste." VHWMR, Part I (emphasis added).[4] The treatment of a waste not considered hazardous under the applicable regulations would not result in the classification of the HRWTF as a hazardous waste management facility.[5]

DISCUSSION

1. Is CWMI's pretreated wastewater a hazardous waste under federal or state regulations?

Virginia state law and regulations provide the primary authority regarding the issues you have raised, since the U.S. Environmental Protection Agency ("EPA") has granted the Virginia Department of Environmental Quality ("DEQ") final authorization to manage this

---

[4] There is no parallel definition of "hazardous waste management facility" in the federal regulations, but EPA restricts its use of the term "hazardous waste management" to those activities involving the "processing, treatment, recovery, and disposal of hazardous waste." 40 C.F.R. § 260.10.

[5] Of course, the HRWTF also must consider whether the acceptance of CWMI's wastewater could cause a violation of the Facility's VPDES permit.

aspect of the hazardous waste program in Virginia.[6] The Virginia Hazardous Waste Management Regulations ("VHWMR"), like the federal regulations under the Resource Conservation and Recovery Act ("RCRA"), divide the universe of hazardous wastes into two sets: wastes that are specifically listed in VHWMR Part III, Appendix 3.1 as hazardous wastes ("listed" wastes) and those that, although not specifically listed, exhibit any of four hazardous characteristics described in VHWMR §§ 3.6 - 3.9 ("characteristic" wastes).

The Virginia regulations do not contain a specific waste listing for wastewater generated in a pretreatment process like CWMI's. The pretreated wastewater therefore is not considered a listed hazardous waste. And CWMI claims that the pretreated wastewater will not be hazardous by virtue of exhibiting any hazardous characteristic. We also considered Virginia's "derived-from" rule, under which certain "solid wastes" generated, or derived, from the treatment of other hazardous waste are themselves considered hazardous.[7] The

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[6] 49 Fed. Reg. 47,391 (Dec. 4, 1984) (granting final authorization to the Virginia Department of Waste Management ("DWM") effective December 18, 1984), and 58 Fed. Reg. 32,855 (June 14, 1993) (authorizing the transfer of responsibility for the hazardous waste program from DWM to the newly-created DEQ).

[7] Because hazardous waste under both the federal and Virginia regulations is a subset of solid waste, a material must be a "solid waste" in order to be considered a hazardous waste. 45 Fed. Reg. 33,090 (May 19, 1980). VHWMR § 3.1.A.2 excludes from the definition of solid waste "any mixture of domestic sewage and other wastes that *pass through a sewer system* to a publicly-owned treatment works ["POTW"] for treatment" (emphasis added). That exemption, however, generally is not considered applicable to wastes trucked to a POTW.

We also considered whether the HRWTF's permitted status under the Virginia Pollutant Discharge Elimination System would affect the classification of CWMI's wastewater under VHWMR § 3.1.A.3, which excludes from the definition of solid waste any "[i]ndustrial wastewater discharges that are point source discharges subject to regulation

(continued...)

question is whether CWMI's wastewater is considered hazardous under the "derived-from" rule because of its derivation from the characteristic hazardous waste treated at CWMI's facility.

The derived-from rule in the Virginia regulations is incorporated into the definition of "hazardous waste" in VHWMR Part I. That definition specifically provides as follows:

> C. Unless and until it meets the criteria of paragraph D:
>
> . . . .
>
> 2. a. Any solid waste generated from the treatment, storage or disposal of a hazardous waste . . . is a hazardous waste.
>
> . . . .
>
> D. Any solid waste described in paragraph C of this definition is not a hazardous waste if it meets the following criteria:
>
> 1. In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste . . . .
>
> 2. In the case of a waste which is a listed waste, contains a listed waste(s), or is derived from a listed waste, it also has been excluded under Part III of these regulations.

The above provision contains both a general rule and an exception. The general rule, set forth in paragraph C, is that solid wastes derived from the treatment[8] of hazardous

---

[7] (...continued)
under § 402 of the Clean Water Act." This exclusion, however, would apply only to the HRWTF discharge itself, not to wastewaters received for treatment at the HRWTF or to the treatment process at the Facility. Wastewater from the CWMI facility would not, therefore, be excluded from the definition of "solid waste" based on this provision.

[8] "Treatment" is defined in VHWMR, Part I, as "any method, technique, or process . . . designed to change the physical, chemical, or biological character or composition of any (continued...)

wastes are themselves hazardous wastes. A derived material may be excepted from the general rule, however (and therefore be excluded from the definition of hazardous waste), if the material meets the applicable criteria in paragraph D above.

Paragraph D sets forth two criteria for exclusion of derived material from the definition of hazardous waste. The first criterion is met if the solid waste generated from the treatment of a hazardous waste does not exhibit any hazardous characteristic. We are assuming this is the case for CWMI's pretreated wastewater based on CWMI's assertion. The pretreated wastewater therefore appears to meet the first criterion for exclusion. The second criterion does not apply to the pretreated wastewater, given that the waste prior to pretreatment is assumed not to be a listed hazardous waste.

The pretreated wastewater therefore is excluded from the definition of hazardous waste under the derived-from rule. Because the pretreated wastewater is not itself a listed hazardous waste, is not characteristically hazardous, and is not considered hazardous under the derived-from rule, CWMI's characterization of it as nonhazardous, at the time it is delivered to the HRWTF, appears to be accurate from a regulatory standpoint.

---

[g] (...continued)
hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the wastes, or so as to render such waste nonhazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume." From the CWMI and HRWTF correspondence you provided us, it appears that the process used at CWMI's facility is designed to "change the physical [or] chemical . . . character or composition" of hazardous wastes (*i.e.*, the petroleum/water mixtures) for the purposes of resource recovery and/or waste disposal. The CWMI process therefore appears to meet the definition of "treatment."

2. Is the HRWTF in any danger of being ruled a hazardous waste treatment facility by accepting CWMI's pretreated wastewater?

Because CWMI's pretreated wastewater is considered nonhazardous, the HRWTF is not in danger of being considered a hazardous waste management facility by virtue of accepting and treating the waste. The Virginia Hazardous Waste Management Regulations define "hazardous waste management facility" as "land and structures . . . used for treating, storing, and disposing of hazardous waste." VHWMR, Part I. A facility may, therefore, accept and treat nonhazardous waste without risk of being considered a hazardous waste management facility and being required to comply with the attendant permitting and facility management requirements.

E.A.D.

cc: Steven J. Koorse, Esquire

Appendix E
Asbestos Sample Results

Marine Chemist Service Inc.
P.O. BOX 6257
11850 TUG BOAT LANE
NEWPORT NEWS, VIRGINIA 23606
N.N. (804) 873-0933; NORF. (804) 627-9933

Lab. Report No. 22474

Date July 14, 1994

Customer:
Environmental Resources Management
11817 Canon Blvd. Suite 308
Newport News, VA 23606

Sample Description:

Chemical Waste Management Inc.
Project #H0504.00.01

Method of Analysis:

EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples (40 CFR 763, Appendix A to Subpart F).

REPORT OF ANALYSIS

(1) Sample #1, Window caulking.

Macroscopic: (1) 100% of this sample is white, caulk material.

Microscopic: (1) The fibrous portion of this sample is made up of a non-asbestiform material (i.e. 15% wollastonite). The remaining 85% is non-fibrous material.

Total Asbestos Percentage = 0%.

(2) Sample #2, Vent caulking.

Macroscopic: (1) 100% of this sample is gray, caulk material.

Microscopic: (1) Approximately 30% of this sample contains chrysotile asbestos. The remaining 70% is non-fibrous material.

Total Asbestos Percentage = 30%.

(3) Sample #3, Plain ceiling tile.

Macroscopic: (1) 100% of this sample is gray, fibrous and compressed material with paint.

Microscopic: (1) The fibrous portion of this sample is made up of non-asbestiform materials (i.e. 40% cellulose, 20% mineral wool). The remaining 40% is non-fibrous material.

Total Asbestos Percentage = 0%.

SIGNED: _____
CHEMIST

Marine Chemist Service Inc.
P.O. BOX 6257
11850 TUG BOAT LANE
NEWPORT NEWS, VIRGINIA 23606
N.N. (804) 873-0933; NORF. (804) 627-9933

Lab. Report No. 22474

Date July 14, 1994

Customer:
Environmental Resources Management
11817 Canon Blvd. Suite 308
Newport News, VA 23606

Sample Description:

Chemical Waste Management Inc.
Project #H0504.00.01

Method of Analysis:

EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples (40 CFR 763, Appendix A to Subpart F).

REPORT OF ANALYSIS

(4) Sample #4, Textured ceiling tile.

Macroscopic: (1) 100% of this sample is gray, fibrous and compressed with paint.

Microscopic: (1) The fibrous portion of this sample is made up of non-asbestiform materials (i.e. 40% cellulose, 35% mineral wool). The remaining 25% is non-fibrous material.

Total Asbestos Percentage = 0%.

(5) Sample #5, Floor tile and adhesive.

Macroscopic: (1) Approximately 90% of this sample is gray, tile material.

(2) Approximately 10% of this sample is yellow, mastic material.

Microscopic: (1) 100% of this portion of this sample is non-fibrous material.

(2) The fibrous portion of this sample is made up of a non-asbestiform material (i.e. 5% cellulose). The remaining 95% is non-fibrous material.

Total Asbestos Percentage = 0%.

SIGNED: _____
CHEMIST

Marine Chemist Service Inc.
P.O. BOX 6257
11850 TUG BOAT LANE
NEWPORT NEWS, VIRGINIA 23606
N.N. (804) 873-0933; NORF. (804) 627-9933

Lab. Report No. 22474

Date July 14, 1994

Customer:
Environmental Resources Management
11817 Canon Blvd. Suite 308
Newport News, VA 23606

Sample Description:

Chemical Waste Management Inc.
Project #H0504.00.01

Method of Analysis:

EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples (40 CFR 763, Appendix A to Subpart F).

REPORT OF ANALYSIS

(6) Sample #6, Textured ceiling material.

Macroscopic:
(1) Approximately 10% of this sample is white, particulate material.
(2) Approximately 10% of this sample is brown, fibrous and compressed material.
(3) Approximately 80% of this sample is gray, particulate material.

Microscopic:
(1) 100% of this portion of this sample is non-fibrous material.
(2) The fibrous portion of this sample is made up of a non-asbestiform material (i.e. 100% cellulose).
(3) The fibrous portion of this sample is made up of a non-asbestiform material (i.e. 10% cellulose). The remaining 90% is non-fibrous material.

Total Asbestos Percentage = 0%.

NOTE: SAMPLES TAKEN BY LABORATORY. TEST REPORT RELATES ONLY TO THE ITEMS TESTED.

SIGNED: _____
CHEMIST

Appendix F
Chain of Title

Property Records Report
Legal Description

ADDRESS : 7515 HARVEST ROAD

A.P.N. # : N/A

LEGAL : 16 ACRES IN BLAND MAGISTERIAL DISTRICT, PRINCE GEORGE COUNTY

PARCEL 1 : 16 ACRES IN BLAND MAGISTERIAL DISTRICT, PRINCE GEORGE COUNTY

Property Records Report
Document Summary

Document Type :	DEED	Doc. # 1
Dated :	PRIOR TO 1944	
Recorded :		
Instrument No. :		
Parcel :	1	

1st Party: *JOSEPH B. AND MABEL B. BISHOP*
As to an undivided * % interest in FEE title.
2nd Party: *OWNED THE PROPERTY*
As to an undivided * % interest in FEE title.

Document Type :	DEED	Doc. # 2
Dated :	04-15-46	
Recorded :	04-15-46	
Instrument No. :	129/503	
Parcel :	1	

1st Party: *JOSEPH B. AND MABEL B. BISHOP*
As to an undivided * % interest in FEE title.
2nd Party: *FRANCIS ALEXANDER EPPS*
As to an undivided * % interest in FEE title.

Document Type :	DEED	Doc. # 3
Dated :	08-22-73	
Recorded :	08-22-73	
Instrument No. :	216/846	
Parcel :	1	

1st Party: *FRANCIS ALEXANDER AND OLIVIA T. EPPS*
As to an undivided * % interest in FEE title.
2nd Party: *ALFRED A. AND KATHERINE W. FORBES*
As to an undivided * % interest in FEE title.

Document Type :	LEASE (06-01-75 TO 05-31-85)	Doc. # 4
Dated :	05-28-75	
Recorded :	05-28-75	
Instrument No. :	222/359	
Parcel :	1	
1st Party:	*ALFRED A. AND KATHERINE W. FORBES*	
	As to an undivided * % interest in LEASEHOLD title.	
2nd Party:	*LLOYD TAYLOR, INC.*	
	As to an undivided * % interest in LEASEHOLD title.	

Document Type :	DEED	Doc. # 5
Dated :	01-06-76	
Recorded :	01-06-76	
Instrument No. :	224/658	
Parcel :	1	
1st Party:	*ALFRED A. AND KATHERINE W. FORBES*	
	As to an undivided * % interest in FEE title.	
2nd Party:	*E.J. BELL*	
	As to an undivided * % interest in FEE title.	

Document Type :	DEED	Doc. # 6
Dated :	07-27-76	
Recorded :	07-27-76	
Instrument No. :	226/779	
Parcel :	1	
1st Party:	*E.J. AND EDITH P. BELL*	
	As to an undivided * % interest in FEE title.	
2nd Party:	*ALFRED A. AND KATHERINE W. FORBES*	
	As to an undivided * % interest in FEE title.	

Document Type :	LAST WILL AND TESTAMENT	Doc. # 7
Dated :	06-25-93	
Recorded :	06-25-93	
Instrument No. :	WILL BK 10/PG 794	
Parcel :	1	

1st Party: *KATHERINE WIGGINS FORBES*
As to an undivided * % interest in FEE title.

2nd Party: *ALFRED FORBES*
As to an undivided * % interest in FEE title.

Document Type :		Doc. #
Dated :		
Recorded :		
Instrument No. :		
Parcel :		

1st Party:
As to an undivided ____ % interest in _____ title.

2nd Party:
As to an undivided ____ % interest in _____ title.

Document Type :		Doc. #
Dated :		
Recorded :		
Instrument No. :		
Parcel :		

1st Party:
As to an undivided ____ % interest in _____ title.

2nd Party:
As to an undivided ____ % interest in _____ title.

Per Parcel Title Transfer Summary

	Parcel 1	Document Info	Interest	Title	Parcel	Document Info	Interest	Title
1st Party	JOSEPH B. AND MABEL B. BISHOP		*	FEE				
2nd Party	OWNED THE PROPERTY		*	FEE				
1st Party	JOSEPH B. AND MABEL B. BISHOP	129/503	*	FEE				
2nd Party	FRANCIS ALEXANDER EPPS	04-15-46	*	FEE				
1st Party	FRANCIS ALEXANDER AND OLIVIA T. EPPS	216/846	*	FEE				
2nd Party	ALFRED A. AND KATHERINE W. FORBES	08-22-73	*	FEE				
1st Party	ALFRED A. AND KATHERINE W. FORBES	222/359	*	LEASEHOLD				
2nd Party	LLOYD TAYLOR, INC.	05-28-75	*	LEASEHOLD				
1st Party	ALFRED A. AND KATHERINE W. FORBES	224/658	*	FEE				
2nd Party	E.J. BELL	01-06-76	*	FEE				
1st Party	E.J. AND EDITH P. BELL	226/779	*	FEE				
2nd Party	ALFRED A. AND KATHERINE W. FORBES	07-27-76	*	FEE				
1st Party	KATHERINE WIGGINS FORBES	WILL BK 10/PG 794	*	FEE				
2nd Party	ALFRED FORBES	06-25-93	*	FEE				
1st Party								
2nd Party								
1st Party								
2nd Party								
1st Party								
2nd Party								
1st Party								
2nd Party								
1st Party								
2nd Party								
1st Party								
2nd Party								

Chain of Title Search ~ Glossary

There are certain terms used in Chain of Title searches which may require clarification. This glossary is designed to provide definitions for some of the most common terms.

1. Break in Chain:

There may appear to be a break in the chain of title as indicated when the sequential tracing of ownership fails. An example of a break would be: *Smith to Jones.....Jones to Wilson.....White to Black.* The missing link is from *Wilson to White.* There are several possible reasons for this occurrence.

1. Due to the size or other physical characteristics of the property, there could be multiple owners at any time when tracing the history of the ownership of the property.
2. There could be an "easement title" over some portion of the property, allowing for use of that portion for a specific purpose.
3. There could be a "multi-percentage interest" in the property, with concurrent multiple owners making up 100% of the fee title. Then, a percentage owner deeds out his particular interest or a percentage of his interest to one or more parties. This causes a perceived break in the chain.

2. Easement:

An easement is the right to enter and use another person's property: a non-possessor right to use another person's real property. Traditionally easements are granted to utility companies and other service organizations or as a right of access to another property.

3. Multiple Owners:

When "others" or "et al" appears on the report in the owner category, it indicates multiple ownership of a single parcel, with too many names to record in the summary. It is frequently used to denote more than a single owner. If the owners are a married couple, both names will appear on the report.

The term "owners" is usually used to indicate owners of multiple parcels, all recorded under a document that covers the multiple parcels.

4. Multiple Parcels:

Some properties are created by combining several adjoining parcels into one large parcel. When this occurs; there might be several different owners until the time of unification. Sometimes the ownership appears to be cloudy until the owners deed out to the single owner of the new larger parcel.

If you encounter any difficulties or have questions, call VISTA at 1-800-733-7606.
We are happy to assist you.

Appendix G
Vista Site Assesment Report

SITE ASSESSMENT REPORT

PROPERTY INFORMATION	CLIENT INFORMATION
Project Name/Ref #: CHEMICAL WASTE CHEMICAL WASTE MANAGEMENT INC 7515 HARVEST RD PRINCE GEORGE, VA 23875 Cross Street: LAT 37 15 023/LONG 77 16 001 Latitude/Longitude: (37.244531, 77.265164)	GINA DIXON ERM - NEWPORT NEWS 11817 CANON BLVD STE 308 NEWPORT NEWS, VA 23606

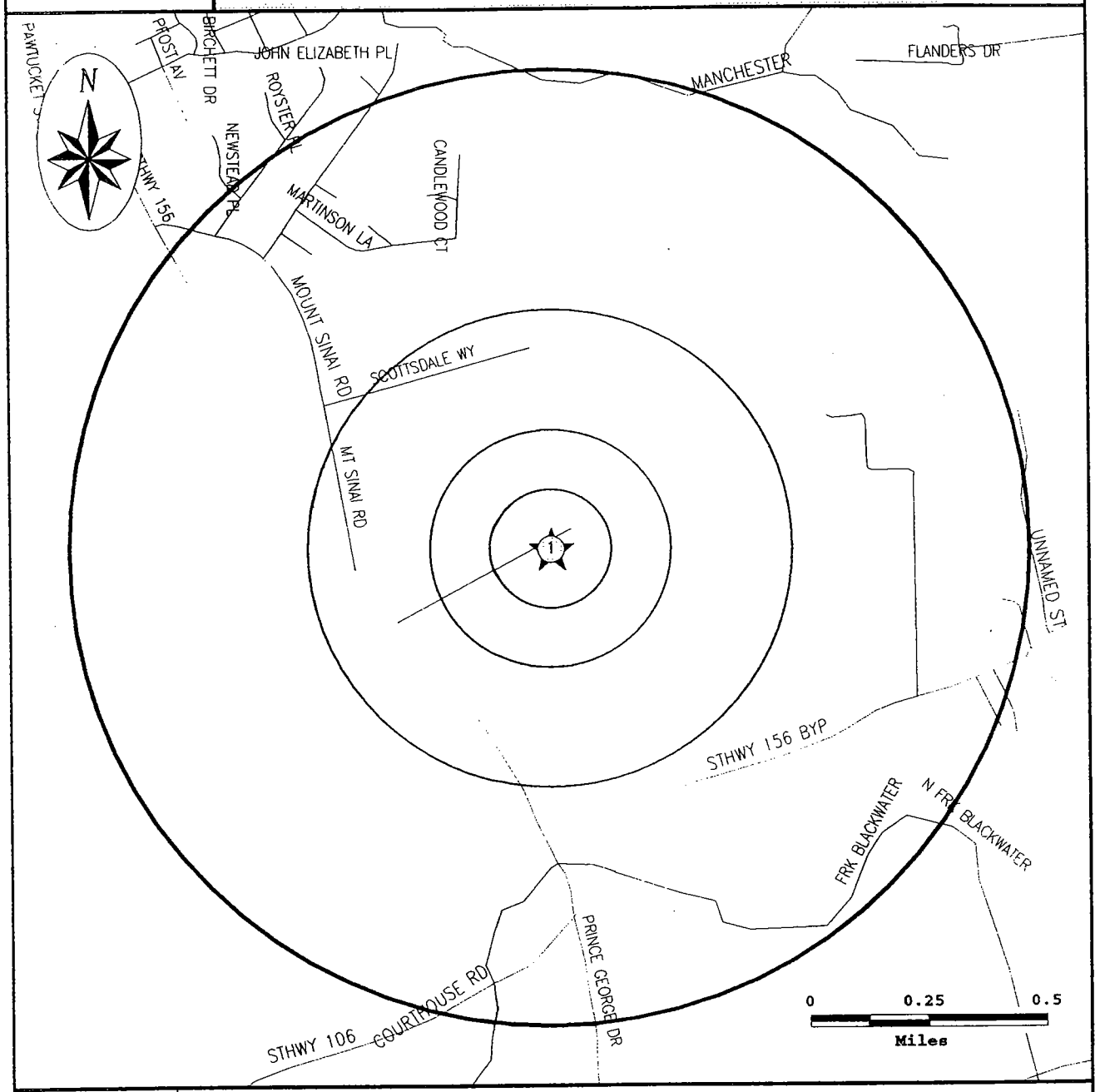
Environmental Risk Distribution Summary Agency / Database - Type of Records			within 1/8 mile	1/8 to 1/4 mile	1/4 to 1/2 mile	1/2 to 1 mile
A) RISK SITES searched to 1 mile:						
US EPA	NPL	Sites designated for Superfund Cleanup by the US EPA	0	0	0	0
STATE	SPL	Sites Prioritized by State for Cleanup	N/A	N/A	N/A	N/A
STATE	SCL	Sites Under Review by State	0	0	0	0
US EPA	RCRIS	Facilities That Treat, Store and/or Dispose of Haz Waste	0	0	0	0
B) RISK SITES searched to 1/2 mile:						
US EPA	CERCLIS	Sites under Review by US EPA	0	0	0	-
STATE	LUST	Sites with Leaking UnderGround Storage Tanks	0	0	0	-
STATE	SWLF	Sites permitted as Solid Waste Landfills, Incinerators, or Transfer stations	0	0	0	-
C) RISK SITES searched to 1/4 mile:						
STATE	UST	Sites with Registered Underground Storage Tanks	0	0	-	-
D) RISK SITES searched to 1/8 mile:						
US EPA	ERNS	Sites With Previous Hazardous Materials Spills	0	-	-	-
US EPA	RCRIS	Sites that Generate Large Quantities of Haz Waste	1	-	-	-
US EPA	RCRIS	Sites that Generate Small Quantities of Haz Waste	0	-	-	-

This geographic database search meets the American Society for Testing Materials (ASTM) standards for a government records review. A (-) indicates the search distance exceeds ASTM search parameters.

LIMITATION OF LIABILITY
Customer proceeds at its own risk in choosing to rely on VISTA services, in whole or in part, prior to proceeding with any transaction. VISTA cannot be an insurer of the accuracy of the information, errors occurring in conversion of data, or for customer's use of data. VISTA and its affiliated companies, officers, agents, employees and independent contractors cannot be held liable for accuracy, storage, delivery, loss or expense suffered by customer resulting directly or indirectly from any information provided by VISTA.

SITE ASSESSMENT REPORT

Map of Risks Within One Mile



Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 mi.	1/2 mi.	1/4 mi.	1/8 mi.
	Single Sites	◆	■	▲	○
	Multiple Sites	◆	■	▲	○
		NPL, SPL, SCL, TSD	CERCLIS, LUST, SWLF	UST	ERNS, GENERATORS

Roads
Highways
Railroads
Rivers or Water Bodies
Utilities

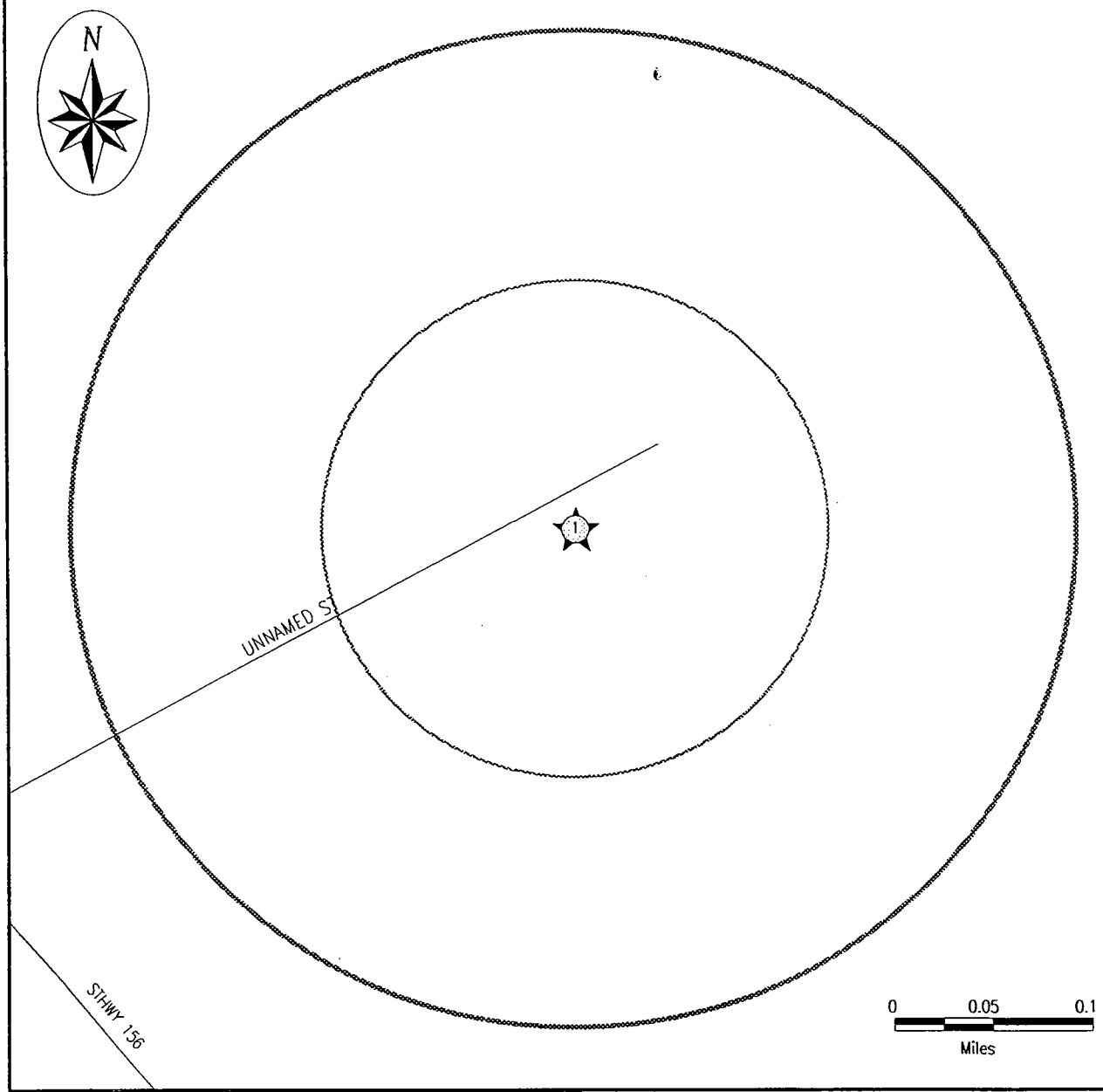
For More Information Call VISTA Environmental Information at 1 - 800 - 767 - 0403

Report ID: 047806-001

Date of Report: **July 05, 1994**

SITE ASSESSMENT REPORT

Map of Risks Within Quarter Mile



Subject Site	Category:	A	B	C	D
	Databases Searched to:	1 mi.	1/2 mi.	1/4 mi.	1/8 mi.
	Single Sites				
	Multiple Sites	NPL, SPL, SCL, TSD	CERCLIS, LUST, SWLF	UST	ERNS, GENERATORS

Roads
Highways
Railroads
Rivers or Water Bodies
Utilities

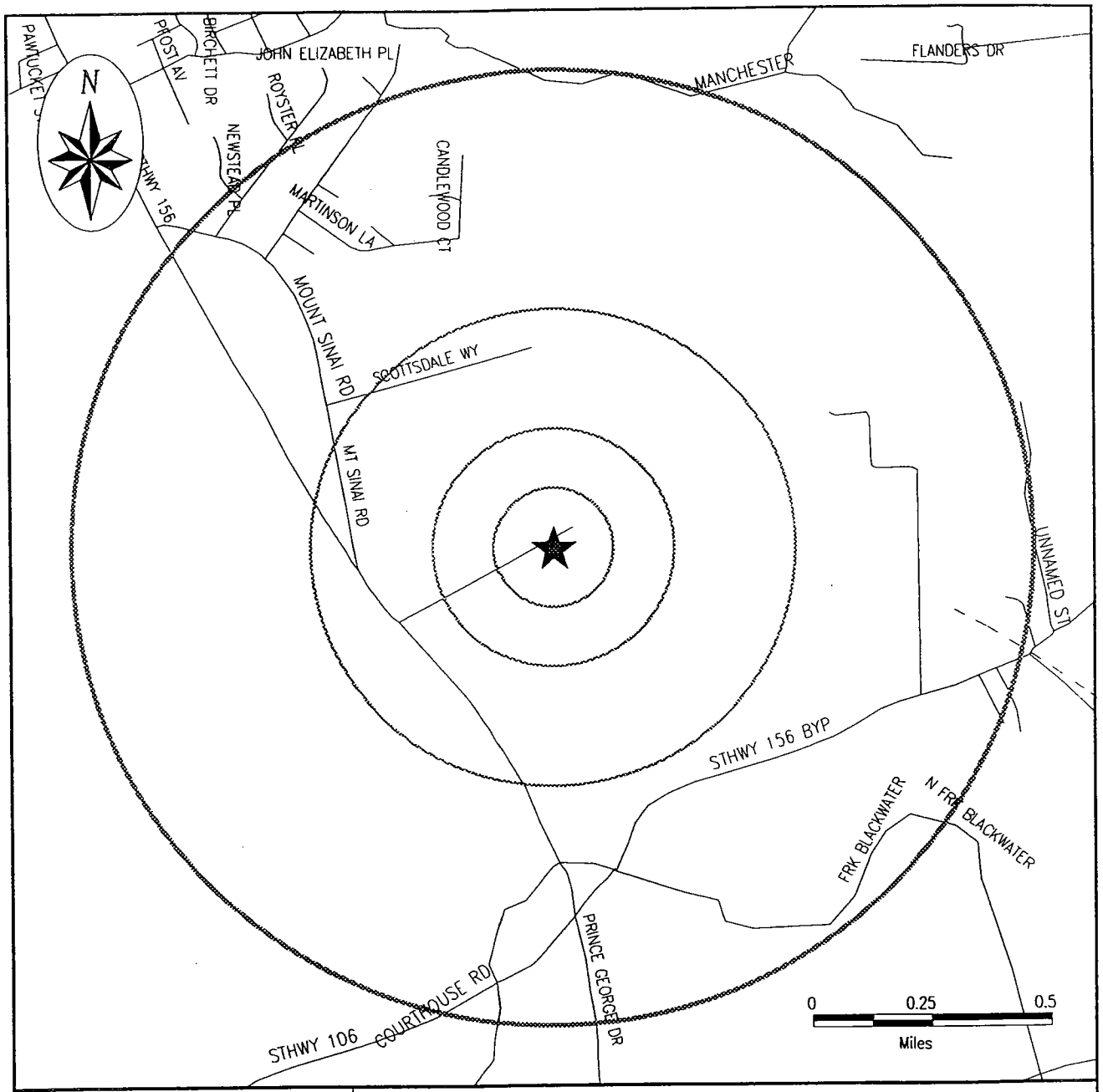
For More Information Call VISTA Environmental Information at **1 - 800 - 767 - 0403**

Report ID: **047806-001**

Date of Report: **July 05, 1994**

SITE ASSESSMENT REPORT

Street Map



Subject Site

Roads, Highways, Rivers, Water Bodies

Railroads, Utilities

SITE ASSESSMENT REPORT

DESCRIPTION OF DATABASES SEARCHED

A) DATABASES SEARCHED TO 1 MILE

NPL
SRC#: 1622

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for NPL was January, 1994.

The National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the US Dept of Health and Human Services and the US EPA in order to become an NPL site.

RCRA-TSD
SRC#: 1372

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for RCRIS was July, 1993.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDs are facilities which treat, store and/or dispose of hazardous waste.

SCL
SRC#: 1716

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Active Sites Cleanup Program was March, 1994.

The Virginia Department of Environmental Control maintains an inventory of facilities subject to investigations concerning likely or threatened releases of hazardous substances from those facilities.

B) DATABASES SEARCHED TO 1/2 MILE

CERCLIS
SRC#: 1623

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for CERCLIS was January, 1994.

The CERCLIS List is a compilation by the EPA of the sites which the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund Act).

LUST
SRC#: 1443

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Pollution Remediation Program Database - LUST Sites was September, 1993.

The Virginia DEQ-Water Division maintains an inventory of leaking underground storage tanks.

SWLF
SRC#: 1363

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Solid Waste Management Facilities was June, 1993.

The Virginia Department of Environmental Control maintains an inventory of the solid waste facilities in the state.

C) DATABASES SEARCHED TO 1/4 MILE

UST's
SRC#: 841

VISTA conducts a database search to identify all sites within 1/4 mile of your property.
The agency release date for Underground Storage Tank Program Database was October, 1992.

The Virginia Department of Environmental Control maintains an inventory of registered underground storage tanks (aboveground tanks are reported when included on this list).

D) DATABASES SEARCHED TO 1/8 MILE

ERNS
SRC#: 1428

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for ERNS was September, 1993.

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the US Coast Guard, the National Response Center and the Department of transportation. A search of the database records for the period October 1986 through September 1993 revealed the following information regarding reported spills of oil or hazardous substances in the stated area.

RCRA-LgGen
SRC#: 1372

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for RCRIS was July, 1993.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Large Generators are facilities which generate at least 1000 kg./month of non-acutely hazardous waste (or 1 kg./month of acutely hazardous waste).

RCRA-SmGen
SRC#: 1372

VISTA conducts a database search to identify all sites within 1/8 mile of your property.
The agency release date for RCRIS was July, 1993.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Small and Very Small generators are facilities which generate less than 1000 kg./month of non-acutely hazardous waste.

SITE ASSESSMENT REPORT

RISK INVENTORY

MAP ID	RISK AT SITE AND THE ADJACENT AREA (within 1/8 mile)	A				B			C	D			NOTES
		NPL	SPL	SCL	TSD	CERCLIS	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	VISTA ID
1	CWM HOPEWELL FACILITY 7515 HARVEST RD PRINCE GEORGE, VA 23875										X		3968621

MAP ID	RISK AT SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)	A				B			C	D			NOTES
		NPL	SPL	SCL	TSD	CERCLIS	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	VISTA ID
No Records Found													

MAP ID	RISK AT SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)	A				B			C	D			NOTES
		NPL	SPL	SCL	TSD	CERCLIS	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	VISTA ID
No Records Found													

MAP ID	RISK AT SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)	A				B			C	D			NOTES
		NPL	SPL	SCL	TSD	CERCLIS	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	VISTA ID
No Records Found													

UNMAPPED SITES	A				B			C	D			NOTES
	NPL	SPL	SCL	TSD	CERCLIS	LUST	SWLF	UST	ERNS	LG GEN	SM GEN	VISTA ID
BURROWSVILLE ELEMENTARY SCHOOL RT. 10 PRINCE GEORGE, VA 23875						X						3383166

SITE ASSESSMENT REPORT

RISKS DETAILS

RISK AT SITE AND THE ADJACENT AREA (within 1/8 mile)			
Property Address with VISTA Verified\Enhanced City and Zip:	**CWM HOPEWELL FACILITY** **7515 HARVEST RD** **PRINCE GEORGE, VA 23875**	**Map ID#:** **VISTA ID#:** **Distance/Direction:**	**1** **3968621** **N/A**
DETAILS REGARDING:	**RCRA-LgGen / SRC# 1372**	EPA ID	VAD988175055
Agency Address:	SAME AS ABOVE		
Generator Class:	GENERATORS WHO GENERATE AT LEAST 1000 KG./MONTH OF NON-ACUTELY HAZARDOUS WASTE OR 1 KG./MONTH OF ACUTELY HAZARDOUS WASTE.		
Generator Requirements Violation:	NO		
Violation of Corrective Action Scheduled:	NO		
Land Requirements Violation:	NO		

RISK AT SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)
No Records Found

RISK AT SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)
No Records Found

RISK AT SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)
No Records Found

UNMAPPED SITES			
Property Address with VISTA Verified\Enhanced City and Zip:	**BURROWSVILLE ELEMENTARY SCH** **RT. 10** **PRINCE GEORGE, VA 23875**	VISTA ID#:	3383166
DETAILS REGARDING:	**LUST / SRC# 1443**	Agency ID	922146
Agency Address:	BURROWSVILLE ELEMENTARY SCHOOL RT. 10 PRINCE GEORGE, VA		
Tank Status:	NOT REPORTED		
Discovery Date:	MAY 22, 1992		
Media Affected:	NOT REPORTED		
Substance:	NOT REPORTED		
Quantity (Units):	NOT REPORTED		
Leak Cause:	UNDERGROUND TANK LEAK		
Leak Source:	NOT REPORTED		
Remedial Action:	NOT REPORTED		
Remedial Status 1:	NOT REPORTED		
Remedial Status 2:	NOT REPORTED		

Appendix H
Vista Facility Risk Profile

VISTA ENVIRONMENTAL INFORMATION

FACILITY RISK PROFILE

Client Project/P.O. No.:	CHEMICAL WAS	VISTA Report No.:	047806011
Client Reference Name:		Date of Report:	June 28, 1994

SITE DESCRIPTION

CHEMICAL WASTE MANAGEMENT INC
7515 HARVEST RD
PRINCE GEORGE, VA
23875
PRINCE GEORGE COUNTY

ADDITIONAL SEARCH CRITERIA

Facility Names: 1) BELPAR ENV 2) CWM
Street Names: 1) HARVEST

A search of the VISTA Environmental Database found 2 facility records which fit the above site descriptions and/or additional search criteria. The following is a summary of the combined risks listed in those records:

Summary of Environmental Risks at Site

Records of Existing or Potential Contamination

- *No records found*

Records of Hazardous Materials or Environmental Permits

- *Site transports hazardous waste(RCRIS Transporter)*
- *Site generates hazardous waste(RCRIS Generator)*
- *Site listed in the EPA FINDS system(FINDS)*

Records of Environmental Non-Compliance

- *No records found*

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5060 Shoreham Place, Suite 300, San Diego, CA 92122
For more info call: (619) 450-6100

INVENTORY OF ENVIRONMENTAL RECORDS REVIEWED

Records of Existing and Potential Contamination

Agency/Database	Type of Record	List Available	Record Found	Rec. Not Found
US EPA NPL	FEDERAL SUPERFUND SITE	Y		X
US EPA CERCLIS	POTENTIAL SUPERFUND SITE	Y		X
US EPA CORRACTS	CORRECTIVE ACTIONS SITE	Y		X
US EPA ERNS	SPILL NOTIFICATION	Y		X
STATE PRIORITY	CONTAMINATED SITE	Y		X
STATE LUST	LEAKING TANKS SITE	Y		X
STATE SOLID WASTE	SOLID WASTE SITE	Y		X
STATE SPILL	SPILL SITE	Y		X

Records Indicating Hazardous Materials or Environmental Permits Present

Agency/Database	Type of Record	List Available	Record Found	Rec. Not Found
US EPA RCRIS	HAZ WASTE TSD SITE	Y		X
US EPA RCRIS	HAZ WASTE TRANSPORTER	Y	X	
US EPA RCRIS	HAZ WASTE GENERATOR	Y	X	
US EPA PADS	PCB HANDLER	Y		X
US EPA CICIS	CHEMICAL PRODUCER SITE	Y		X
US EPA TRIS	TOXIC CHEMICALS RELEASED	Y		X
US EPA PCS	WASTE WATER PERMIT	Y		X
US EPA CDS AIRS	HAZARDOUS AIR EMISSIONS	Y		X
US EPA FATES	PESTICIDES PROCESSOR	Y		X
US EPA FRDS	PUBLIC WATER SUPPLY	Y		X
US EPA FINDS	FACILITY INDEX SYSTEM	Y	X	
STATE UST/AST	TANK SITES	Y		X

Records of Environmental Compliance

Agency/Database	Type of Record	List Available	Record Found	Rec. Not Found
US EPA RCRIS	RCRA COMPLIANCE	Y		X
US EPA RAATS	RCRA ADMIN. ACTIONS	Y		X
US EPA PCS	NPDES COMPL/ENF	Y		X
US EPA AIRS	AIR EMISSION COMPLIANCE	Y		X
US EPA FTTS	FIFRA/TSCA/EPCRA COMP	Y		X
US DoL OSHA	OSHA COMPLIANCE	Y		X
US EPA SETS	RESPONSIBLE PARTY	Y		X
US EPA DOCKET	CIVIL JUDICIAL ACTIONS	Y		X

VISTA ENVIRONMENTAL INFORMATION, INC.

Compliance Records Found Under Site Description

Facility Name	: CWM HOPEWELL FACILITY
Facility Address	: 7515 HARVEST RD
Facility City/Zip	: PRINCE GEORGE, VA 23875
Facility County	: NOT REPORTED
VISTA #	: 3968621

EPA ID: VAD988175055

RCRA COMPLIANCE INFORMATION

RCRA compliance evaluations are conducted by the US EPA or the state agency responsible for the RCRA program. The following is a summary of the facility's current compliance status and a listing of all RCRA evaluations. The current compliance status indicates any outstanding (not yet corrected) non-compliances issues found during one of the listed evaluations or after appropriate testing is completed by the agency.

RCRA Compliance Status: In Compliance

RCRA Compliance History:

Evaluations with at least one Class One Violation: 0

Evaluations

None

Violations

None

EPA Enforcements

None

State Enforcements

None

EPA Oversight Enforcements

None

VISTA ENVIRONMENTAL INFORMATION, INC.

General Records Found Under Site Description

Facility Name	: **CWM HOPEWELL FACILITY**
Facility Address	: **7515 HARVEST RD**
Facility City/Zip	: **PRINCE GEORGE, VA 23875**
Facility County	: **PRINCE GEORGE**
VISTA #	: **3968621**

Industry Description
Sic Code:8641 - SVC-CIVIC & SOCIAL ASSOCIATIONS

FINDS Record Details

EPA ID Number:VAD988175055

Agency Id Information

Program Name: Haz Waste
Agency Id: VAD988175055

RCRA Record Details

EPA ID Number:VAD988175055

Generator Details

Waste Quantity Class: Generates at least 1000 kg./month of non-acutely hazardous waste (or 1 kg./month of acutely hazardous waste).

RCRA Record Details

EPA ID Number:VAD988175055

Transporter Details

Transports hazardous waste by highway

APPENDIX 1

Explanation of VISTA's Database Search for this Report:

To provide you with the most complete search of government records possible, VISTA does extensive computerized matching of records to combine agency data from different various sources. VISTA also performs address verification to the Post Office's Zip+4 database to assure the accuracy of the city and zip code information.

Search Criteria

- matching street number,street name, city but no zip code:
- matching street number,street name, zip code:
- within 10 street numbers with matching facility name:
- no street number, but matching street name, city or zip and facility name:
- intersection of matching street name, matching city or zip and facility name:
- no street number or street name with matching city or zip and facility name:
- P.O. Box with matching city or zip and facility name:

Limitations of Information:

All data contained in this report was obtained from the federal and state government environmental databases. VISTA does not warrant the accuracy, timeliness, merchantability, completeness or usefulness of any information furnished, and the subscriber accepts any and all risks resulting from decisions made based solely or in part on VISTA information.

FACILITY RISK PROFILE

FEDERAL AGENCY RECORDS SEARCHED

Agency	Database	Type of Record	Database Currency
US EPA	NPL	Federal Superfund Sites	01/94
US EPA	CERCLIS	Sites Under Review by US EPA	01/94
US EPA	TRIS	Facilities Releasing Toxic Chemicals	08/93
US EPA	CICIS	Chemical Producers (as of 1981)	05/86
US EPA	FATES	Manufacturers or Processors of Pesticides	10/93
US EPA	PCS	Site with NPDES Water Dischg. Permit	07/93
US EPA	CDS AIRS	Produces Hazardous Air Emissions	09/93
US EPA	RCRIS	Hazardous Waste Handlers	07/93
US EPA	CORRACTS	RCRA Corrective Action Site	01/94
US EPA	RAATS	RCRA Administrative Action Site	11/93
US EPA	PADS	PCB Handler	10/93
US EPA	FRDS	Operators of a Pub. Drinking Water Sys.	09/93
US EPA	FINDS	Site on EPA's Facility Index System	04/94
US EPA	ERNS	Spill Sites	10/92
US DoL	OSHA	Facilities with OSHA Inspections	04/93
US EPA	FTTS	FIFRA/TSCA/EPCRA Compliance Sites	01/94
US EPA	SETS	Superfund Potentially Responsible Parties	01/94
US EPA	DOCKETS	Sites listed in Civil Enforcement System	01/94

VIRGINIA STATE AGENCY RECORDS SEARCHED

Agency	Type of Record	Database Currency
Department of Environmental Control	Active Sites Cleanup Program	03/94
DEQ-Water Division	Pollution Remediation Program Database - LUST Sites	09/93
Department of Environmental Control	Solid Waste Management Facilities	06/93
Department of Environmental Control	Underground Storage Tank Program Database	10/92
DEQ-Water Division	Pollution Remediation Program Database - Spill Sites	09/93

VIRGINIA State Agency Databases Searched (continued)

Agency	Type of Record	Database Currency
Department of Emergency Services	Haz Mat Database	09/93

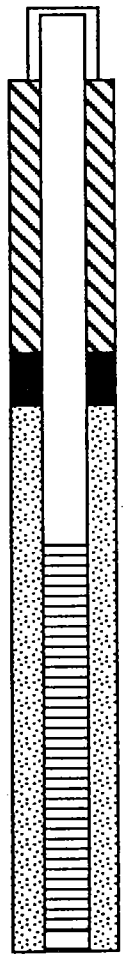
Appendix I
Soil Boring/Monitoring Well Logs

ERM
11817 Canon Blvd., Suite 308
Newport News, Virginia 23606
(804)-873-4853

Boring /Monitoring Well Log

Client: Clean Harbors, Inc		WO#: H0504.00.01	Boring/Well I.D.: MW-1
Project: Chemical Waste Management		Well Construction Data	
Date Started: 6/30/94	Date Completed: 6/30/94	Screen: 2" PVC, 0.01 slot	From: 12.5 To: 22.5
Logged By: D. Caldwell	Checked By:	Pack: Medium to Coarse Sand	From: 8.6 To: 23
Drilling Co.: Fishburn Drilling	Driller: Joe Walther	Seal: Bentonite	From: 7.1 To: 8.6
Method: 4.25" Hollow StemAuger	Equipment: Acker AD II	Grout:	From: 0 To: 7.1
Boring Depth: 23'	Ground Surface Elevation:	Inner Casing:	
Initial GW Level: 11.9'	GW Level: / Time/Date	Outer Casing/Stick Up:	

Depth	Sample Type	Sample ID.	Blow Counts	Headspace	Lithology	Description	Remarks	Well Construction
0						0-2.5 Tan-brown SILT, some rock fragments		
				0.8 ppm		2.5-10 Gray, brown, tan and orange mottled silty CLAY		
5				1.1 ppm				
				1.3 ppm				
10						10-15 Orange-tan and gray clayey SILT to fine SAND, moist at 15'		
				1.4 ppm				
15						15-16 Orange-tan and gray fine silty SAND		
						16-23 Orange-tan and gray clayey SILT to fine SAND, wet at 17'		
20				1.2 ppm				
25								
30								

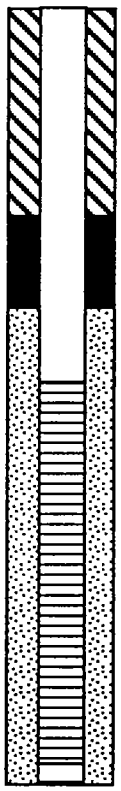


ERM
11817 Canon Blvd., Suite 308
Newport News, Virginia 23606
(804)-873-4853

Boring /Monitoring Well Log

Client: Clean Harbors, Inc		WO#: H0504.00.01	Boring/Well I.D.: MW-2
Project: Chemical Waste Management		Well Construction Data	
Date Started: 6/30/94	Date Completed: 6/30/94	Screen: 2" PVC, 0.01 slot	From: 10 To: 20
Logged By: D. Caldwell	Checked By:	Pack: Medium to Coarse Sand	From: 8 To: 20.5
Drilling Co.: Fishburn Drilling	Driller: Joe Walther	Seal: Bentonite	From: 5.7 To: 8
Method: 4.25" Hollow StemAuger	Equipment: Acker AD II	Grout:	From: 0 To: 5.7
Boring Depth: 20.5'	Ground Surface Elevation:	Inner Casing:	
Initial GW Level:	GW Level: / Time/Date	Outer Casing/Stick Up:	

Depth	Sample Type	Sample ID.	Blow Counts	Headspace	Lithology	Description	Remarks	Well Construction
0						0-3 Tan-brown SILT, some rock fragments		
						3-10 Orange-brown, silty CLAY		
5								
				1.1 ppm				
10						10-12 Orange-tan and gray mottled clayey SILT		
				1.5 ppm				
				1.1 ppm		12-16 Orange-tan and gray silty to medium grained SAND		
15								
						16-20.5 Orange-tan and gray clayey SILT to fine SAND		
20								
25								
30								

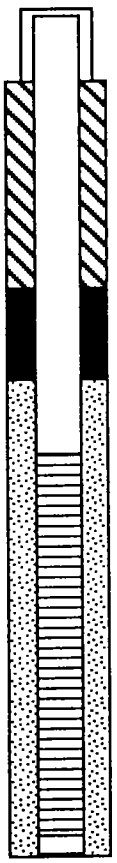


ERM
11817 Canon Blvd., Suite 308
Newport News, Virginia 23606
(804)-873-4853

Boring /Monitoring Well Log

Client: Clean Harbors, Inc		WO#: H0504.00.01	Boring/Well I.D.: MW-3
Project: Chemical Waste Management		Well Construction Data	
Date Started: 6/30/94	Date Completed: 6/30/94	Screen: 2" PVC, 0.01 slot	From: 10 To: 20
Logged By: D. Caldwell	Checked By:	Pack: Medium to Coarse Sand	From: 7.8 To: 20.5
Drilling Co.: Fishburn Drilling	Driller: Joe Walther	Seal: Bentonite	From: 5.5 To: 7.8
Method: 4.25" Hollow StemAuger	Equipment: Acker AD II	Grout:	From: 0 To: 5.5
Boring Depth: 20.5'	Ground Surface Elevation:	Inner Casing:	
Initial GW Level:	GW Level: Time/Date	Outer Casing/Stick Up:	

Depth	Sample Type	Sample ID.	Blow Counts	Headspace	Lithology	Description	Remarks	Well Construction
0				1.2 ppm		0-2.5 Tan-brown SILT		
				1.7 ppm		3-9 Orange-brown and gray mottled, silty CLAY		
5								
10				1.1 ppm		9-12.5 Orange-tan silty to medium grained SAND		
				0.6 ppm		12.5-20.5 Light gray to tan, fine to medium grained SAND		
15				1.1 ppm				
20								
25								
30								



Appendix J
Surface Soil Analytical Results

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 WOOD ROAD • BRAINTREE, MA 02184
(617) 849-1800

REPORT OF ANALYSIS

Clean Harbors, Inc.
1200 Crown Colony Drive
P.O. Box 9137
Quincy, MA 02269-9137

Project: CHEM WASTE MGT.
P.O. #: GW5404

Date Received: 07/06/94
CHES Lab #: 9407090

Attn: Mr. Steve Pozner

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date: Michael J. Murray 7/14/94

Michael J. Murray
Laboratory Manager

Client: Clean Harbors, Inc.
Sample I.D.: 82117, MW-1
Sample Type: Water

CHES Lab #: 9407090-01AB
Date Received: 07/06/94

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 103 %
Toluene-d8: 96 %
p-BFB: 88 %

Acceptance Criteria:

Water	Soil
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: 82117, MW-1
Sample Type: Water

CHES Lab #: 9407090-01G
Date Received: 07/06/94

Semi-Volatile Base/Neutral Extractable Organics - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	10
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 70 %	35-114%	23-120%
2-Fluorobiphenyl: 70 %	43-116%	30-115%
Terphenyl-d14: 85 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: 82117, MW-1
Sample Type: Water

CHES Lab #: 9407090-01G
Date Received: 07/06/94

Semi-Volatile Acid Extractable Organics - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 52 %	21-100%	25-121%
Phenol-d5: 42 %	10-94%	24-113%
2,4,6-Tribromophenol: 94 %	10-123%	19-122%

CleanHarbors

Client: Clean Harbors, Inc.
Sample I.D.: 82117, MW-1
Sample Type: Water

CHES Lab #: 9407090-01N
Date Received: 07/06/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3510/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/16/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	45.6%	34-104%

Client: Clean Harbors, Inc.
Sample I.D.: 82117, MW-1
Sample Type: Water

CHES Lab #: 9407090-01C
Date Received: 07/06/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	0.1	ND	07/12/94	07/15/94	503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: 82118, MW-2
Sample Type: Water

CHES Lab #: 9407090-02AB
Date Received: 07/06/94

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	79
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	108 %	76-114%	70-121%
Toluene-d8:	97 %	88-110%	84-138%
p-BFB:	88 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: 82118, MW-2
Sample Type: Water

CHES Lab #: 9407090-02G
Date Received: 07/06/94

Semi-Volatile Base/Neutral Extractable Organics - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	11
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 55 %	35-114%	23-120%
2-Fluorobiphenyl: 61 %	43-116%	30-115%
Terphenyl-d14: 83 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: 82118, MW-2
Sample Type: Water

CHES Lab #: 9407090-02G
Date Received: 07/06/94

Semi-Volatile Acid Extractable Organics - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 36 %	21-100%	25-121%
Phenol-d5: 31 %	10-94%	24-113%
2,4,6-Tribromophenol: 80 %	10-123%	19-122%

CleanHarbors

Client: Clean Harbors, Inc.
Sample I.D.: 82118, MW-2
Sample Type: Water

CHES Lab #: 9407090-02N
Date Received: 07/06/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3510/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/18/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	53.9%	34-104%

Client: Clean Harbors, Inc.
Sample I.D.: 82118, MW-2
Sample Type: Water

CHES Lab #: 9407090-02C
Date Received: 07/06/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	0.1	ND	07/12/94	07/15/94	503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: 82119, MW-3
Sample Type: Water

CHES Lab #: 9407090-03AB
Date Received: 07/06/94

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	102 %	76-114%	70-121%
Toluene-d8:	99 %	88-110%	84-138%
p-BFB:	87 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: 82119, MW-3
Sample Type: Water

CHES Lab #: 9407090-03G
Date Received: 07/06/94

Semi-Volatile Base/Neutral Extractable Organics - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	11
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	51	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	51	ND
Chrysene	10	ND	4-Nitroaniline	51	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 67 %	35-114%	23-120%
2-Fluorobiphenyl: 79 %	43-116%	30-115%
Terphenyl-d14: 94 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: 82119, MW-3
Sample Type: Water

CHES Lab #: 9407090-03G
Date Received: 07/06/94

Semi-Volatile Acid Extractable Organics - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	51	ND
2,4-Dinitrophenol	51	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	51	ND
Pentachlorophenol	51	ND
Phenol	10	ND
2,4,5-Trichlorophenol	51	ND
2,4,6-Trichlorophenol	51	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 50 %	21-100%	25-121%
Phenol-d5: 43 %	10-94%	24-113%
2,4,6-Tribromophenol: 91 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: 82119, MW-3
Sample Type: Water

CHES Lab #: 9407090-03N
Date Received: 07/06/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3510/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/16/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	41.2%	34-104%

Client: Clean Harbors, Inc.
Sample I.D.: 82119, MW-3
Sample Type: Water

CHES Lab #: 9407090-03C
Date Received: 07/06/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	0.1	ND	07/12/94	07/15/94	503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: 82120, EX. WATER WELL-DOM.
Sample Type: Water

CHES Lab #: 9407090-04AB
Date Received: 07/06/94

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	48
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 106 %
Toluene-d8: 97 %
p-BFB: 86 %

Acceptance Criteria:

Water	Soil
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: 82120, EX. WATER WELL-DOM.
Sample Type: Water

CHES Lab #: 9407090-04G
Date Received: 07/06/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	12
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 64 %	35-114%	23-120%
2-Fluorobiphenyl: 60 %	43-116%	30-115%
Terphenyl-d14: 80 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: 82120, EX. WATER WELL-DOM.
Sample Type: Water

CHES Lab #: 9407090-04G
Date Received: 07/06/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 46 %	21-100%	25-121%
Phenol-d5: 41 %	10-94%	24-113%
2,4,6-Tribromophenol: 94 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: 82120, EX. WATER WELL-DOM.
Sample Type: Water

CHES Lab #: 9407090-04N
Date Received: 07/06/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3510/8080 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/16/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	81.8%	34-104%

Client: Clean Harbors, Inc.
Sample I.D.: 82120, EX. WATER WELL-DOM.
Sample Type: Water

CHES Lab #: 9407090-04C
Date Received: 07/06/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	0.1	ND	07/12/94	07/15/94	503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: 82121, EX. MONITORING WELL
Sample Type: Water

CHES Lab #: 9407090-05AB
Date Received: 07/06/94

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	106 %	76-114%	70-121%
Toluene-d8:	96 %	88-110%	84-138%
p-BFB:	87 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: 82121, EX. MONITORING WELL
Sample Type: Water

CHES Lab #: 9407090-05G
Date Received: 07/06/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 60 %	35-114%	23-120%
2-Fluorobiphenyl: 68 %	43-116%	30-115%
Terphenyl-d14: 75 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: 82121, EX. MONITORING WELL
Sample Type: Water

CHES Lab #: 9407090-05G
Date Received: 07/06/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 44 %	21-100%	25-121%
Phenol-d5: 42 %	10-94%	24-113%
2,4,6-Tribromophenol: 99 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: 82121, EX. MONITORING WELL
Sample Type: Water

CHES Lab #: 9407090-05N
Date Received: 07/06/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3510/8080 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/16/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	74.3%	34-104%

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Client: Clean Harbors, Inc.
Sample I.D.: 82121, EX. MONITORING WELL
Sample Type: Water

CHES Lab #: 9407090-05C
Date Received: 07/06/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	0.1	ND	07/12/94	07/15/94	503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: 25929, TRIP BLANK
Sample Type: Water

CHES Lab #: 9407090-06AB
Date Received: 07/06/94

Volatile Organics - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes
ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	110 %	76-114%	70-121%
Toluene-d8:	99 %	88-110%	84-138%
p-BFB:	86 %	86-115%	59-113%

QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9407090

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.

Volatile Organics Blank - System D
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	20	ND	1,2-Dichloropropane	5	ND
Benzene	5	ND	cis-1,3-Dichloropropene	5	ND
Bromodichloromethane	5	ND	trans-1,3-Dichloropropene	5	ND
Bromoform	5	ND	Ethylbenzene	5	ND
Bromomethane	10	ND	2-Hexanone	5	ND
2-Butanone	20	ND	Methylene chloride	20	ND
Carbon disulfide	10	ND	4-Methyl-2-Pentanone	5	ND
Carbon tetrachloride	5	ND	Methyl-t-butylether (MTBE)	10	ND
Chlorobenzene	5	ND	Styrene	5	ND
Chloroethane	10	ND	1,1,2,2-Tetrachloroethane	5	ND
2-Chloroethyl vinyl ether	10	ND	Tetrachloroethene	5	ND
Chloroform	5	ND	Toluene	5	ND
Chloromethane	10	ND	1,1,1-Trichloroethane	5	ND
Dibromochloromethane	5	ND	1,1,2-Trichloroethane	5	ND
Dibromoethane (EDB)	5	ND	Trichloroethene	5	ND
1,1-Dichloroethane	5	ND	Trichlorofluoromethane	5	ND
1,2-Dichloroethane	5	ND	Vinyl acetate	10	ND
1,1-Dichloroethene	5	ND	Vinyl chloride	10	ND
trans-1,2-Dichloroethene	5	ND	Total xylenes	5	ND

Notes

ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 105%
Toluene-d8: 97%
p-BFB: 86%

Acceptance Criteria:

Water	Soil
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%

Semi-Volatile Base/Neutral Extractable Organics Blank - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	10	ND	Dimethylphthalate	10	ND
Acenaphthylene	10	ND	Di-n-butylphthalate	10	ND
Anthracene	10	ND	2,4-Dinitrotoluene	10	ND
Benzo(a)anthracene	10	ND	2,6-Dinitrotoluene	10	ND
Benzo(a)pyrene	10	ND	Di-n-octylphthalate	10	ND
Benzo(b)fluoranthene	10	ND	Fluoranthene	10	ND
Benzo(g,h,i)perylene	10	ND	Fluorene	10	ND
Benzo(k)fluoranthene	10	ND	Hexachlorobenzene	10	ND
Bis(2-chloroethoxy)methane	10	ND	Hexachlorobutadiene	10	ND
Bis(2-chloroethyl)ether	10	ND	Hexachlorocyclopentadiene	10	ND
Bis(2-chloroisopropyl)ether	10	ND	Hexachloroethane	10	ND
Bis(2-ethylhexyl)phthalate	20	ND	Indeno(1,2,3-cd)pyrene	10	ND
4-Bromophenyl phenyl ether	10	ND	Isophorone	10	ND
Butylbenzylphthalate	10	ND	2-Methylnaphthalene	10	ND
4-Chloroaniline	10	ND	Naphthalene	10	ND
2-Chloronaphthalene	10	ND	2-Nitroaniline	50	ND
4-Chlorophenyl phenyl ether	10	ND	3-Nitroaniline	50	ND
Chrysene	10	ND	4-Nitroaniline	50	ND
Dibenzo(a,h)anthracene	10	ND	Nitrobenzene	10	ND
Dibenzofuran	10	ND	N-Nitroso-di-n-propylamine	10	ND
1,2-Dichlorobenzene	10	ND	N-Nitrosodiphenylamine	10	ND
1,3-Dichlorobenzene	10	ND	Phenanthrene	10	ND
1,4-Dichlorobenzene	10	ND	Pyrene	10	ND
3,3'-Dichlorobenzidine	20	ND	1,2,4-Trichlorobenzene	10	ND
Diethylphthalate	10	ND			

Notes

ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 64 %
2-Fluorobiphenyl: 72 %
Terphenyl-d14: 82 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%

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Semi-Volatile Acid Extractable Organics Blank - System B
by EPA Method 3510/8270 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	10	ND
2-Chlorophenol	10	ND
2,4-Dichlorophenol	10	ND
2,4-Dimethylphenol	10	ND
4,6-Dinitro-2-methylphenol	50	ND
2,4-Dinitrophenol	50	ND
2-Methylphenol	10	ND
4-Methylphenol	10	ND
2-Nitrophenol	10	ND
4-Nitrophenol	50	ND
Pentachlorophenol	50	ND
Phenol	10	ND
2,4,5-Trichlorophenol	50	ND
2,4,6-Trichlorophenol	50	ND

Notes

ND = Below practical quantitation limit (PQL)
* = ug/l

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 51 %	21-100%	25-121%
Phenol-d5: 41 %	10-94%	24-113%
2,4,6-Tribromophenol: 91 %	10-123%	19-122%

Client: Clean Harbors, Inc.

CHES Lab #: 9407090

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3510/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/12/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	1.0	ND	ug/l
PCB - Aroclor 1221	1.0	ND	ug/l
PCB - Aroclor 1232	1.0	ND	ug/l
PCB - Aroclor 1242	1.0	ND	ug/l
PCB - Aroclor 1248	1.0	ND	ug/l
PCB - Aroclor 1254	1.0	ND	ug/l
PCB - Aroclor 1260	1.0	ND	ug/l

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	78.6%	34-104%

Client: Clean Harbors, Inc.

CHES Lab #: 9407090

BLANK ANALYSIS

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	0.1	ND	07/12/94	07/13/94	503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/l
Soil/solid samples based on sample dry weight

5-110

Sample Chain of Custody

PS 7/6/94

W.O. Number: H0564.00.01 Project Name: Chem Waste Mgt.

Sampler: Ross Miller / Nicole Vincent

9407090

ERM T.R. Number	Date	Time	COMP	GRAB	Sample Location	Number of Containers	VOCs (8240)	SVOCs (8270) (BNA)	PCBs (8080)	TPH (IR)			Remarks
82117	7.5.94	1300		X	MW-1	5	✓	✓	✓	✓			01AB, B, G, N, C
82118	7.5.94	1315		X	MW-2	3	✓	✓	✓	✓			02AB, B, G, N, C
82119	7.5.94	1600		X	MW-3	5	✓	✓	✓	✓			02AB, B, G, N, C
82120	7.5.94	1330		X	Ex. Water Well - Dom.	5	✓	✓	✓	✓			04AB, B, G, N, C
82121	7.5.94	1630		X	Ex. Monitoring Well	5	✓	✓	✓	✓			05AB, B, G, N, C
25929	~~7.5.94~~ 6.24.94			X	Trip Blank	2	✓						06AB, B, ~~G~~ PS

Sample Relinquished	Date	Time	Sample Received by:	Date	Time	Reason for Transfer
Nicole S. Vincent	7/5/94	1800	Fed Ex			Lab Delivery & Analysis
Fed Ex	7/6/94	10:30	Paul Sanchez	7/6/94	1030	

Copies: **White** and **Yellow** copies accompany sample shipments to laboratory. **Yellow** copy retained by laboratory. **White** copy to be returned to ERM for files. **Pink** copy retained by sampler. **Gold** copy extra as needed (warehouse)

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Method References

(a) "Methods for Chemical Analysis of Water and Wastes," Publication EPA-600/4-79-020, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1979, revised March 1983.

(b) "Standard Methods for the Examination of Water and Wastewater," 16th ed., American Public Health Association, American Water Works Association, Water Pollution Control Federation, Washington, D.C., 1985.

(c) "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods," 2nd ed., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C., July 1982.

(d) "The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils," Publication EPA-600/4-81-045, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, 1981.

(e) "EPA-CLP Organic Analyses of Low and Medium Hazardous Waste Sample (Water and Soil) Procedures Revision," U.S. Environmental Protection Agency, July 1985.

(f) "Test Procedures for Analyses of Organic Pollutants," Code of Federal Regulations, Appendix A, Part 136, July 1, 1985.

(g) "Measurement of Purgeable Organic Compounds in Drinking Water by Gas Chromatography/Mass Spectrometry," Method 524, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.

(h) "Prescribed Procedures for Measurement of Radioactivity in Drinking Water," Publication EPA-600/4-80-032, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati, August 1980.

(i) "Clean Harbors Radiological Environmental Analytical Procedures," Clean Harbors Analytical Services, Braintree, MA, October 1985.

(j) "Methods for Chlorinated Phenoxy Acid Herbicides in Industrial Effluents," MDQARL, Cincinnati, November 23, 1973.

(k) "Annual Book of Standards," Section 11: Water and Environmental Technology, Vols. 11.01-11.04, American Society for Testing and Materials, Philadelphia, 1983, 1984, 1985.

(l) "Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater," U.S. Environmental Protection Agency, September 1978.

(m) "Methods for Organochlorine Pesticides in Industrial Effluents," MDQARL, Environmental Protection Agency, Cincinnati, November 28, 1973.

(n) "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," Techniques of Water-Resources Investigation of the U.S. Geological Survey, Book 5, Chapter A-1, U.S. Department of the Interior, 1979.

(o) "Measurement of Trihalomethanes in Drinking Water by Gas Chromatography/Mass Spectrometry and Selected Ion Monitoring," Method 501.3, U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.

(p) "The Analysis of Trihalomethanes in Finished Waters by the Purge and Trap Method," U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.

(q) "The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction," U.S. Environmental Protection Agency, Environmental Monitoring and Support Laboratory, Cincinnati.

(r) "Official Methods of Analysis," Association of Official Analytical Chemists, 14th ed., 1984.

(s) "Hach Handbook of Water Analysis," Hach Chemical Company, Loveland, CO, 1979.

(t) H.M. Prichard and T.F. Gesell, "Rapid Measurement of Rn-222 Concentrations in Water with a Commercial Liquid Scintillation Counter," Health Physics, Vol. 33, 1977, pp. 577-581.

(u) "Petroleum Products and Lubricants (I): D56-D1660," Annual Book of ASTM Standards, Volume 5.01, American Society for Testing and Materials, Philadelphia, 1985.

(v) "Petroleum Products and Lubricants (III): D2981-Latest; Catalysts," Annual Book of ASTM Standards, Volume 5.03, American Society for Testing and Materials, Philadelphia, 1985.

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
325 WOOD ROAD • BRAINTREE, MA 02184
(617) 849-1800

REPORT OF ANALYSIS

Clean Harbors, Inc.
1200 Crown Colony Drive
P.O. Box 9137
Quincy, MA 02269-9137

Project: CHEM WASTE
P.O. #: GW5404

Date Received: 07/05/94
CHES Lab #: 9407054

Attn: Mr. Steve Pozner

Enclosed are the results for the sample(s) delivered to our laboratory (DEP Laboratory ID# MA032) on the date indicated above.

The methods listed represent those methodologies which were used to develop the best analytical techniques. Analytical results and quality assurance protocols are based on these guidelines. These meet the requirements for the reporting of results under the RCRA, NPDES and Safe Drinking Water Act regulations.

Clean Harbors Environmental Services has an active program of quality assurance and quality control. The program closely follows the guidance provided in the EPA Contract Laboratory Program Statement of Work (organic and inorganic), the guidance provided in SW-846, and many other pertinent documents.

Should you have any questions concerning this work, please do not hesitate to contact me.

The information contained in this report is, to the best of my knowledge, accurate and complete.

Per/Date: Michael J. Murray 7/19/94

Michael J. Murray
Laboratory Manager

Client: Clean Harbors, Inc.
Sample I.D.: S-4
Sample Type: Soil

CHES Lab #: 9407054-01A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	102 %	76-114%	70-121%
Toluene-d8:	102 %	88-110%	84-138%
p-BFB:	97 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-4
Sample Type: Soil

CHES Lab #: 9407054-010
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System B
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	17	ND	Dimethylphthalate	17	ND
Acenaphthylene	17	ND	Di-n-butylphthalate	17	ND
Anthracene	17	ND	2,4-Dinitrotoluene	17	ND
Benzo(a)anthracene	17	ND	2,6-Dinitrotoluene	17	ND
Benzo(a)pyrene	17	ND	Di-n-octylphthalate	17	ND
Benzo(b)fluoranthene	17	ND	Fluoranthene	17	ND
Benzo(g,h,i)perylene	17	ND	Fluorene	17	ND
Benzo(k)fluoranthene	17	ND	Hexachlorobenzene	17	ND
Bis(2-chloroethoxy)methane	17	ND	Hexachlorobutadiene	17	ND
Bis(2-chloroethyl)ether	17	ND	Hexachlorocyclopentadiene	17	ND
Bis(2-chloroisopropyl)ether	17	ND	Hexachloroethane	17	ND
Bis(2-ethylhexyl)phthalate	33	ND	Indeno(1,2,3-cd)pyrene	17	ND
4-Bromophenyl phenyl ether	17	ND	Isophorone	17	ND
Butylbenzylphthalate	17	ND	2-Methylnaphthalene	17	ND
4-Chloroaniline	17	ND	Naphthalene	17	ND
2-Chloronaphthalene	17	ND	2-Nitroaniline	83	ND
4-Chlorophenyl phenyl ether	17	ND	3-Nitroaniline	83	ND
Chrysene	17	ND	4-Nitroaniline	83	ND
Dibenzo(a,h)anthracene	17	ND	Nitrobenzene	17	ND
Dibenzofuran	17	ND	N-Nitroso-di-n-propylamine	17	ND
1,2-Dichlorobenzene	17	ND	N-Nitrosodiphenylamine	17	ND
1,3-Dichlorobenzene	17	ND	Phenanthrene	17	ND
1,4-Dichlorobenzene	17	ND	Pyrene	17	ND
3,3'-Dichlorobenzidine	33	ND	1,2,4-Trichlorobenzene	17	ND
Diethylphthalate	17	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
NA = Due to dilution necessary to analyze the sample, the surrogate recoveries were unable to be calculated.
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: NA	35-114%	23-120%
2-Fluorobiphenyl: NA	43-116%	30-115%
Terphenyl-d14: NA	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-4
Sample Type: Soil

CHES Lab #: 9407054-010
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System B
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/14/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	17	ND
2-Chlorophenol	17	ND
2,4-Dichlorophenol	17	ND
2,4-Dimethylphenol	17	ND
4,6-Dinitro-2-methylphenol	83	ND
2,4-Dinitrophenol	83	ND
2-Methylphenol	17	ND
4-Methylphenol	17	ND
2-Nitrophenol	17	ND
4-Nitrophenol	83	ND
Pentachlorophenol	83	ND
Phenol	17	ND
2,4,5-Trichlorophenol	83	ND
2,4,6-Trichlorophenol	83	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
NA = Due to dilution necessary to analyze the sample, the surrogate recoveries were unable to be calculated.
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: NA	21-100%	25-121%
Phenol-d5: NA	10-94%	24-113%
2,4,6-Tribromophenol: NA	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-4
Sample Type: Soil

CHES Lab #: 9407054-010
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c).

Extraction Date: 07/11/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	86.9%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-4
Sample Type: Soil

CHES Lab #: 9407054-010
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	9,900	07/07/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-4
Sample Type: Soil

CHES Lab #: 9407054-010
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	92.0	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-3
Sample Type: Soil

CHES Lab #: 9407054-02A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	106 %	76-114%	70-121%
Toluene-d8:	93 %	88-110%	84-138%
p-BFB:	107 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-3
Sample Type: Soil

CHES Lab #: 9407054-020
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	0.67	ND	Dimethylphthalate	0.67	ND
Acenaphthylene	0.67	ND	Di-n-butylphthalate	0.67	ND
Anthracene	0.67	ND	2,4-Dinitrotoluene	0.67	ND
Benzo(a)anthracene	0.67	ND	2,6-Dinitrotoluene	0.67	ND
Benzo(a)pyrene	0.67	ND	Di-n-octylphthalate	0.67	ND
Benzo(b)fluoranthene	0.67	ND	Fluoranthene	0.67	ND
Benzo(g,h,i)perylene	0.67	ND	Fluorene	0.67	ND
Benzo(k)fluoranthene	0.67	ND	Hexachlorobenzene	0.67	ND
Bis(2-chloroethoxy)methane	0.67	ND	Hexachlorobutadiene	0.67	ND
Bis(2-chloroethyl)ether	0.67	ND	Hexachlorocyclopentadiene	0.67	ND
Bis(2-chloroisopropyl)ether	0.67	ND	Hexachloroethane	0.67	ND
Bis(2-ethylhexyl)phthalate	1.3	ND	Indeno(1,2,3-cd)pyrene	0.67	ND
4-Bromophenyl phenyl ether	0.67	ND	Isophorone	0.67	ND
Butylbenzylphthalate	0.67	ND	2-Methylnaphthalene	0.67	ND
4-Chloroaniline	0.67	ND	Naphthalene	0.67	ND
2-Chloronaphthalene	0.67	ND	2-Nitroaniline	3.3	ND
4-Chlorophenyl phenyl ether	0.67	ND	3-Nitroaniline	3.3	ND
Chrysene	0.67	ND	4-Nitroaniline	3.3	ND
Dibenzo(a,h)anthracene	0.67	ND	Nitrobenzene	0.67	ND
Dibenzofuran	0.67	ND	N-Nitroso-di-n-propylamine	0.67	ND
1,2-Dichlorobenzene	0.67	ND	N-Nitrosodiphenylamine	0.67	ND
1,3-Dichlorobenzene	0.67	ND	Phenanthrene	0.67	ND
1,4-Dichlorobenzene	0.67	ND	Pyrene	0.67	ND
3,3'-Dichlorobenzidine	1.3	ND	1,2,4-Trichlorobenzene	0.67	ND
Diethylphthalate	0.67	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 62 %
2-Fluorobiphenyl: 88 %
Terphenyl-d14: 111 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-3
Sample Type: Soil

CHES Lab #: 9407054-020
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	0.67	ND
2-Chlorophenol	0.67	ND
2,4-Dichlorophenol	0.67	ND
2,4-Dimethylphenol	0.67	ND
4,6-Dinitro-2-methylphenol	3.3	ND
2,4-Dinitrophenol	3.3	ND
2-Methylphenol	0.67	ND
4-Methylphenol	0.67	ND
2-Nitrophenol	0.67	ND
4-Nitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
Phenol	0.67	ND
2,4,5-Trichlorophenol	3.3	ND
2,4,6-Trichlorophenol	3.3	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 66 %	21-100%	25-121%
Phenol-d5: 93 %	10-94%	24-113%
2,4,6-Tribromophenol: 127 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-3
Sample Type: Soil

CHES Lab #: 9407054-020
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	0.1	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	92.8%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-3
Sample Type: Soil

CHES Lab #: 9407054-020
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	670	07/07/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

CleanHarbors

Client: Clean Harbors, Inc.
Sample I.D.: S-3
Sample Type: Soil

CHES Lab #: 9407054-020
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	87.0	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-2
Sample Type: Soil

CHES Lab #: 9407054-03A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	106 %	76-114%	70-121%
Toluene-d8:	93 %	88-110%	84-138%
p-BFB:	104 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-2
Sample Type: Soil

CHES Lab #: 9407054-030
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	1.7	ND	Dimethylphthalate	1.7	ND
Acenaphthylene	1.7	ND	Di-n-butylphthalate	1.7	ND
Anthracene	1.7	ND	2,4-Dinitrotoluene	1.7	ND
Benzo(a)anthracene	1.7	ND	2,6-Dinitrotoluene	1.7	ND
Benzo(a)pyrene	1.7	ND	Di-n-octylphthalate	1.7	ND
Benzo(b)fluoranthene	1.7	ND	Fluoranthene	1.7	ND
Benzo(g,h,i)perylene	1.7	ND	Fluorene	1.7	ND
Benzo(k)fluoranthene	1.7	ND	Hexachlorobenzene	1.7	ND
Bis(2-chloroethoxy)methane	1.7	ND	Hexachlorobutadiene	1.7	ND
Bis(2-chloroethyl)ether	1.7	ND	Hexachlorocyclopentadiene	1.7	ND
Bis(2-chloroisopropyl)ether	1.7	ND	Hexachloroethane	1.7	ND
Bis(2-ethylhexyl)phthalate	3.3	ND	Indeno(1,2,3-cd)pyrene	1.7	ND
4-Bromophenyl phenyl ether	1.7	ND	Isophorone	1.7	ND
Butylbenzylphthalate	1.7	ND	2-Methylnaphthalene	1.7	ND
4-Chloroaniline	1.7	ND	Naphthalene	1.7	ND
2-Chloronaphthalene	1.7	ND	2-Nitroaniline	8.3	ND
4-Chlorophenyl phenyl ether	1.7	ND	3-Nitroaniline	8.3	ND
Chrysene	1.7	ND	4-Nitroaniline	8.3	ND
Dibenzo(a,h)anthracene	1.7	ND	Nitrobenzene	1.7	ND
Dibenzofuran	1.7	ND	N-Nitroso-di-n-propylamine	1.7	ND
1,2-Dichlorobenzene	1.7	ND	N-Nitrosodiphenylamine	1.7	ND
1,3-Dichlorobenzene	1.7	ND	Phenanthrene	1.7	ND
1,4-Dichlorobenzene	1.7	ND	Pyrene	1.7	ND
3,3'-Dichlorobenzidine	3.3	ND	1,2,4-Trichlorobenzene	1.7	ND
Diethylphthalate	1.7	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 83 %
2-Fluorobiphenyl: 114 %
Terphenyl-d14: 132 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-2
Sample Type: Soil

CHES Lab #: 9407054-030
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	1.7	ND
2-Chlorophenol	1.7	ND
2,4-Dichlorophenol	1.7	ND
2,4-Dimethylphenol	1.7	ND
4,6-Dinitro-2-methylphenol	8.3	ND
2,4-Dinitrophenol	8.3	ND
2-Methylphenol	1.7	ND
4-Methylphenol	1.7	ND
2-Nitrophenol	1.7	ND
4-Nitrophenol	8.3	ND
Pentachlorophenol	8.3	ND
Phenol	1.7	ND
2,4,5-Trichlorophenol	8.3	ND
2,4,6-Trichlorophenol	8.3	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 83 %	21-100%	25-121%
Phenol-d5: 109 %	10-94%	24-113%
2,4,6-Tribromophenol: 137 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-2
Sample Type: Soil

CHES Lab #: 9407054-030
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	85.6%	78-148%

CleanHarbors

Client: Clean Harbors, Inc.
Sample I.D.: S-2
Sample Type: Soil

CHES Lab #: 9407054-030
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	390	07/07/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-2
Sample Type: Soil

CHES Lab #: 9407054-030
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	86.2	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-7
Sample Type: Soil

CHES Lab #: 9407054-04A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	107 %	76-114%	70-121%
Toluene-d8:	87 %	88-110%	84-138%
p-BFB:	111 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-7
Sample Type: Soil

CHES Lab #: 9407054-040
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	1.7	ND	Dimethylphthalate	1.7	ND
Acenaphthylene	1.7	ND	Di-n-butylphthalate	1.7	ND
Anthracene	1.7	ND	2,4-Dinitrotoluene	1.7	ND
Benzo(a)anthracene	1.7	ND	2,6-Dinitrotoluene	1.7	ND
Benzo(a)pyrene	1.7	ND	Di-n-octylphthalate	1.7	ND
Benzo(b)fluoranthene	1.7	ND	Fluoranthene	1.7	ND
Benzo(g,h,i)perylene	1.7	ND	Fluorene	1.7	ND
Benzo(k)fluoranthene	1.7	ND	Hexachlorobenzene	1.7	ND
Bis(2-chloroethoxy)methane	1.7	ND	Hexachlorobutadiene	1.7	ND
Bis(2-chloroethyl)ether	1.7	ND	Hexachlorocyclopentadiene	1.7	ND
Bis(2-chloroisopropyl)ether	1.7	ND	Hexachloroethane	1.7	ND
Bis(2-ethylhexyl)phthalate	3.3	ND	Indeno(1,2,3-cd)pyrene	1.7	ND
4-Bromophenyl phenyl ether	1.7	ND	Isophorone	1.7	ND
Butylbenzylphthalate	1.7	ND	2-Methylnaphthalene	1.7	ND
4-Chloroaniline	1.7	ND	Naphthalene	1.7	ND
2-Chloronaphthalene	1.7	ND	2-Nitroaniline	8.3	ND
4-Chlorophenyl phenyl ether	1.7	ND	3-Nitroaniline	8.3	ND
Chrysene	1.7	ND	4-Nitroaniline	8.3	ND
Dibenzo(a,h)anthracene	1.7	ND	Nitrobenzene	1.7	ND
Dibenzofuran	1.7	ND	N-Nitroso-di-n-propylamine	1.7	ND
1,2-Dichlorobenzene	1.7	ND	N-Nitrosodiphenylamine	1.7	ND
1,3-Dichlorobenzene	1.7	ND	Phenanthrene	1.7	ND
1,4-Dichlorobenzene	1.7	ND	Pyrene	1.7	ND
3,3'-Dichlorobenzidine	3.3	ND	1,2,4-Trichlorobenzene	1.7	ND
Diethylphthalate	1.7	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 75 %
2-Fluorobiphenyl: 113 %
Terphenyl-d14: 138 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-7
Sample Type: Soil

CHES Lab #: 9407054-040
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	1.7	ND
2-Chlorophenol	1.7	ND
2,4-Dichlorophenol	1.7	ND
2,4-Dimethylphenol	1.7	ND
4,6-Dinitro-2-methylphenol	8.3	ND
2,4-Dinitrophenol	8.3	ND
2-Methylphenol	1.7	ND
4-Methylphenol	1.7	ND
2-Nitrophenol	1.7	ND
4-Nitrophenol	8.3	ND
Pentachlorophenol	8.3	ND
Phenol	1.7	ND
2,4,5-Trichlorophenol	8.3	ND
2,4,6-Trichlorophenol	8.3	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 77 %	21-100%	25-121%
Phenol-d5: 111 %	10-94%	24-113%
2,4,6-Tribromophenol: 134 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-7
Sample Type: Soil

CHES Lab #: 9407054-040
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	89.2%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-7
Sample Type: Soil

CHES Lab #: 9407054-040
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	250	07/07/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-7
Sample Type: Soil

CHES Lab #: 9407054-040
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	78.0	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-1
Sample Type: Soil

CHES Lab #: 9407054-05A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	104 %	76-114%	70-121%
Toluene-d8:	96 %	88-110%	84-138%
p-BFB:	102 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-1
Sample Type: Soil

CHES Lab #: 9407054-050
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	0.33	ND	Dimethylphthalate	0.33	ND
Acenaphthylene	0.33	ND	Di-n-butylphthalate	0.33	ND
Anthracene	0.33	ND	2,4-Dinitrotoluene	0.33	ND
Benzo(a)anthracene	0.33	ND	2,6-Dinitrotoluene	0.33	ND
Benzo(a)pyrene	0.33	ND	Di-n-octylphthalate	0.33	ND
Benzo(b)fluoranthene	0.33	ND	Fluoranthene	0.33	ND
Benzo(g,h,i)perylene	0.33	ND	Fluorene	0.33	ND
Benzo(k)fluoranthene	0.33	ND	Hexachlorobenzene	0.33	ND
Bis(2-chloroethoxy)methane	0.33	ND	Hexachlorobutadiene	0.33	ND
Bis(2-chloroethyl)ether	0.33	ND	Hexachlorocyclopentadiene	0.33	ND
Bis(2-chloroisopropyl)ether	0.33	ND	Hexachloroethane	0.33	ND
Bis(2-ethylhexyl)phthalate	0.67	ND	Indeno(1,2,3-cd)pyrene	0.33	ND
4-Bromophenyl phenyl ether	0.33	ND	Isophorone	0.33	ND
Butylbenzylphthalate	0.33	ND	2-Methylnaphthalene	0.33	ND
4-Chloroaniline	0.33	ND	Naphthalene	0.33	ND
2-Chloronaphthalene	0.33	ND	2-Nitroaniline	1.7	ND
4-Chlorophenyl phenyl ether	0.33	ND	3-Nitroaniline	1.7	ND
Chrysene	0.33	ND	4-Nitroaniline	1.7	ND
Dibenzo(a,h)anthracene	0.33	ND	Nitrobenzene	0.33	ND
Dibenzofuran	0.33	ND	N-Nitroso-di-n-propylamine	0.33	ND
1,2-Dichlorobenzene	0.33	ND	N-Nitrosodiphenylamine	0.33	ND
1,3-Dichlorobenzene	0.33	ND	Phenanthrene	0.33	ND
1,4-Dichlorobenzene	0.33	ND	Pyrene	0.33	ND
3,3'-Dichlorobenzidine	0.67	ND	1,2,4-Trichlorobenzene	0.33	ND
Diethylphthalate	0.33	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 63 %	35-114%	23-120%
2-Fluorobiphenyl: 61 %	43-116%	30-115%
Terphenyl-d14: 79 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-1
Sample Type: Soil

CHES Lab #: 9407054-050
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	0.33	ND
2-Chlorophenol	0.33	ND
2,4-Dichlorophenol	0.33	ND
2,4-Dimethylphenol	0.33	ND
4,6-Dinitro-2-methylphenol	1.7	ND
2,4-Dinitrophenol	1.7	ND
2-Methylphenol	0.33	ND
4-Methylphenol	0.33	ND
2-Nitrophenol	0.33	ND
4-Nitrophenol	1.7	ND
Pentachlorophenol	1.7	ND
Phenol	0.33	ND
2,4,5-Trichlorophenol	1.7	ND
2,4,6-Trichlorophenol	1.7	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 65 %	21-100%	25-121%
Phenol-d5: 80 %	10-94%	24-113%
2,4,6-Tribromophenol: 97 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-1
Sample Type: Soil

CHES Lab #: 9407054-050
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	90.8%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-1
Sample Type: Soil

CHES Lab #: 9407054-050
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	170	07/07/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-1
Sample Type: Soil

CHES Lab #: 9407054-050
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	90.6	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-5
Sample Type: Soil

CHES Lab #: 9407054-06A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	106 %	76-114%	70-121%
Toluene-d8:	100 %	88-110%	84-138%
p-BFB:	104 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-5
Sample Type: Soil

CHES Lab #: 9407054-060
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System B
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	1.6	ND	Dimethylphthalate	1.6	ND
Acenaphthylene	1.6	ND	Di-n-butylphthalate	1.6	ND
Anthracene	1.6	ND	2,4-Dinitrotoluene	1.6	ND
Benzo(a)anthracene	1.6	ND	2,6-Dinitrotoluene	1.6	ND
Benzo(a)pyrene	1.6	ND	Di-n-octylphthalate	1.6	ND
Benzo(b)fluoranthene	1.6	ND	Fluoranthene	1.6	ND
Benzo(g,h,i)perylene	1.6	ND	Fluorene	1.6	ND
Benzo(k)fluoranthene	1.6	ND	Hexachlorobenzene	1.6	ND
Bis(2-chloroethoxy)methane	1.6	ND	Hexachlorobutadiene	1.6	ND
Bis(2-chloroethyl)ether	1.6	ND	Hexachlorocyclopentadiene	1.6	ND
Bis(2-chloroisopropyl)ether	1.6	ND	Hexachloroethane	1.6	ND
Bis(2-ethylhexyl)phthalate	3.3	ND	Indeno(1,2,3-cd)pyrene	1.6	ND
4-Bromophenyl phenyl ether	1.6	ND	Isophorone	1.6	ND
Butylbenzylphthalate	1.6	ND	2-Methylnaphthalene	1.6	ND
4-Chloroaniline	1.6	ND	Naphthalene	1.6	ND
2-Chloronaphthalene	1.6	ND	2-Nitroaniline	8.2	ND
4-Chlorophenyl phenyl ether	1.6	ND	3-Nitroaniline	8.2	ND
Chrysene	1.6	ND	4-Nitroaniline	8.2	ND
Dibenzo(a,h)anthracene	1.6	ND	Nitrobenzene	1.6	ND
Dibenzofuran	1.6	ND	N-Nitroso-di-n-propylamine	1.6	ND
1,2-Dichlorobenzene	1.6	ND	N-Nitrosodiphenylamine	1.6	ND
1,3-Dichlorobenzene	1.6	ND	Phenanthrene	1.6	ND
1,4-Dichlorobenzene	1.6	ND	Pyrene	1.6	ND
3,3'-Dichlorobenzidine	3.3	ND	1,2,4-Trichlorobenzene	1.6	ND
Diethylphthalate	1.6	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 67 %	35-114%	23-120%
2-Fluorobiphenyl: 97 %	43-116%	30-115%
Terphenyl-d14: 146 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-5
Sample Type: Soil

CHES Lab #: 9407054-060
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System B
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/14/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	1.6	ND
2-Chlorophenol	1.6	ND
2,4-Dichlorophenol	1.6	ND
2,4-Dimethylphenol	1.6	ND
4,6-Dinitro-2-methylphenol	8.2	ND
2,4-Dinitrophenol	8.2	ND
2-Methylphenol	1.6	ND
4-Methylphenol	1.6	ND
2-Nitrophenol	1.6	ND
4-Nitrophenol	8.2	ND
Pentachlorophenol	8.2	ND
Phenol	1.6	ND
2,4,5-Trichlorophenol	8.2	ND
2,4,6-Trichlorophenol	8.2	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 74 %	21-100%	25-121%
Phenol-d5: 91 %	10-94%	24-113%
2,4,6-Tribromophenol: 110 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-5
Sample Type: Soil

CHES Lab #: 9407054-060
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	94.9%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-5
Sample Type: Soil

CHES Lab #: 9407054-060
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	380	07/08/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-5
Sample Type: Soil

CHES Lab #: 9407054-060
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	91.5	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-8
Sample Type: Soil

CHES Lab #: 9407054-07A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	111 %	76-114%	70-121%
Toluene-d8:	95 %	88-110%	84-138%
p-BFB:	98 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-8
Sample Type: Soil

CHES Lab #: 9407054-070
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	0.33	ND	Dimethylphthalate	0.33	ND
Acenaphthylene	0.33	ND	Di-n-butylphthalate	0.33	ND
Anthracene	0.33	ND	2,4-Dinitrotoluene	0.33	ND
Benzo(a)anthracene	0.33	ND	2,6-Dinitrotoluene	0.33	ND
Benzo(a)pyrene	0.33	ND	Di-n-octylphthalate	0.33	ND
Benzo(b)fluoranthene	0.33	ND	Fluoranthene	0.33	ND
Benzo(g,h,i)perylene	0.33	ND	Fluorene	0.33	ND
Benzo(k)fluoranthene	0.33	ND	Hexachlorobenzene	0.33	ND
Bis(2-chloroethoxy)methane	0.33	ND	Hexachlorobutadiene	0.33	ND
Bis(2-chloroethyl)ether	0.33	ND	Hexachlorocyclopentadiene	0.33	ND
Bis(2-chloroisopropyl)ether	0.33	ND	Hexachloroethane	0.33	ND
Bis(2-ethylhexyl)phthalate	0.67	ND	Indeno(1,2,3-cd)pyrene	0.33	ND
4-Bromophenyl phenyl ether	0.33	ND	Isophorone	0.33	ND
Butylbenzylphthalate	0.33	ND	2-Methylnaphthalene	0.33	ND
4-Chloroaniline	0.33	ND	Naphthalene	0.33	ND
2-Chloronaphthalene	0.33	ND	2-Nitroaniline	1.7	ND
4-Chlorophenyl phenyl ether	0.33	ND	3-Nitroaniline	1.7	ND
Chrysene	0.33	ND	4-Nitroaniline	1.7	ND
Dibenzo(a,h)anthracene	0.33	ND	Nitrobenzene	0.33	ND
Dibenzofuran	0.33	ND	N-Nitroso-di-n-propylamine	0.33	ND
1,2-Dichlorobenzene	0.33	ND	N-Nitrosodiphenylamine	0.33	ND
1,3-Dichlorobenzene	0.33	ND	Phenanthrene	0.33	ND
1,4-Dichlorobenzene	0.33	ND	Pyrene	0.33	ND
3,3'-Dichlorobenzidine	0.67	ND	1,2,4-Trichlorobenzene	0.33	ND
Diethylphthalate	0.33	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 68 %	35-114%	23-120%
2-Fluorobiphenyl: 75 %	43-116%	30-115%
Terphenyl-d14: 78 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-8
Sample Type: Soil

CHES Lab #: 9407054-070
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	0.33	ND
2-Chlorophenol	0.33	ND
2,4-Dichlorophenol	0.33	ND
2,4-Dimethylphenol	0.33	ND
4,6-Dinitro-2-methylphenol	1.7	ND
2,4-Dinitrophenol	1.7	ND
2-Methylphenol	0.33	ND
4-Methylphenol	0.33	ND
2-Nitrophenol	0.33	ND
4-Nitrophenol	1.7	ND
Pentachlorophenol	1.7	ND
Phenol	0.33	ND
2,4,5-Trichlorophenol	1.7	ND
2,4,6-Trichlorophenol	1.7	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 73 %	21-100%	25-121%
Phenol-d5: 86 %	10-94%	24-113%
2,4,6-Tribromophenol: 95 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-8
Sample Type: Soil

CHES Lab #: 9407054-070
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	94.0%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-8
Sample Type: Soil

CHES Lab #: 9407054-070
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	160	07/07/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-8
Sample Type: Soil

CHES Lab #: 9407054-070
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	89.4	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

Client: Clean Harbors, Inc.
Sample I.D.: S-6
Sample Type: Soil

CHES Lab #: 9407054-08A
Date Received: 07/05/94

Volatile Organics - System C
by EPA Method 8260 (ref. c)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg

QA/QC

Surrogate Recoveries:		Acceptance Criteria: Water	Acceptance Criteria: Soil
1,2-Dichloroethane-d4:	110 %	76-114%	70-121%
Toluene-d8:	99 %	88-110%	84-138%
p-BFB:	97 %	86-115%	59-113%

Client: Clean Harbors, Inc.
Sample I.D.: S-6
Sample Type: Soil

CHES Lab #: 9407054-080
Date Received: 07/05/94

Semi-Volatile Base/Neutral Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.*
Acenaphthene	0.33	ND	Dimethylphthalate	0.33	ND
Acenaphthylene	0.33	ND	Di-n-butylphthalate	0.33	ND
Anthracene	0.33	ND	2,4-Dinitrotoluene	0.33	ND
Benzo(a)anthracene	0.33	ND	2,6-Dinitrotoluene	0.33	ND
Benzo(a)pyrene	0.33	ND	Di-n-octylphthalate	0.33	ND
Benzo(b)fluoranthene	0.33	ND	Fluoranthene	0.33	ND
Benzo(g,h,i)perylene	0.33	ND	Fluorene	0.33	ND
Benzo(k)fluoranthene	0.33	ND	Hexachlorobenzene	0.33	ND
Bis(2-chloroethoxy)methane	0.33	ND	Hexachlorobutadiene	0.33	ND
Bis(2-chloroethyl)ether	0.33	ND	Hexachlorocyclopentadiene	0.33	ND
Bis(2-chloroisopropyl)ether	0.33	ND	Hexachloroethane	0.33	ND
Bis(2-ethylhexyl)phthalate	0.67	ND	Indeno(1,2,3-cd)pyrene	0.33	ND
4-Bromophenyl phenyl ether	0.33	ND	Isophorone	0.33	ND
Butylbenzylphthalate	0.33	ND	2-Methylnaphthalene	0.33	ND
4-Chloroaniline	0.33	ND	Naphthalene	0.33	ND
2-Chloronaphthalene	0.33	ND	2-Nitroaniline	1.7	ND
4-Chlorophenyl phenyl ether	0.33	ND	3-Nitroaniline	1.7	ND
Chrysene	0.33	ND	4-Nitroaniline	1.7	ND
Dibenzo(a,h)anthracene	0.33	ND	Nitrobenzene	0.33	ND
Dibenzofuran	0.33	ND	N-Nitroso-di-n-propylamine	0.33	ND
1,2-Dichlorobenzene	0.33	ND	N-Nitrosodiphenylamine	0.33	ND
1,3-Dichlorobenzene	0.33	ND	Phenanthrene	0.33	ND
1,4-Dichlorobenzene	0.33	ND	Pyrene	0.33	ND
3,3'-Dichlorobenzidine	0.67	ND	1,2,4-Trichlorobenzene	0.33	ND
Diethylphthalate	0.33	ND			

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
Nitrobenzene-d5: 68 %	35-114%	23-120%
2-Fluorobiphenyl: 67 %	43-116%	30-115%
Terphenyl-d14: 79 %	33-141%	18-137%

Client: Clean Harbors, Inc.
Sample I.D.: S-6
Sample Type: Soil

CHES Lab #: 9407054-080
Date Received: 07/05/94

Semi-Volatile Acid Extractable Organics - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	0.33	ND
2-Chlorophenol	0.33	ND
2,4-Dichlorophenol	0.33	ND
2,4-Dimethylphenol	0.33	ND
4,6-Dinitro-2-methylphenol	1.7	ND
2,4-Dinitrophenol	1.7	ND
2-Methylphenol	0.33	ND
4-Methylphenol	0.33	ND
2-Nitrophenol	0.33	ND
4-Nitrophenol	1.7	ND
Pentachlorophenol	1.7	ND
Phenol	0.33	ND
2,4,5-Trichlorophenol	1.7	ND
2,4,6-Trichlorophenol	1.7	ND

Notes
ND = Below practical quantitation limit (PQL)
* = mg/kg
Hydrocarbon background present in sample.

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 73 %	21-100%	25-121%
Phenol-d5: 85 %	10-94%	24-113%
2,4,6-Tribromophenol: 99 %	10-123%	19-122%

Client: Clean Harbors, Inc.
Sample I.D.: S-6
Sample Type: Soil

CHES Lab #: 9407054-080
Date Received: 07/05/94

Polychlorinated Biphenyls (PCBs)
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/15/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	86.6%	78-148%

Client: Clean Harbors, Inc.
Sample I.D.: S-6
Sample Type: Soil

CHES Lab #: 9407054-080
Date Received: 07/05/94

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	57	07/08/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.
Sample I.D.: S-6
Sample Type: Soil

CHES Lab #: 9407054-080
Date Received: 07/05/94

Parameter	PQL	Result	Units	Analysis Date	Method Number and Reference
Total Solids	--	89.9	%	07/07/94	209F(b)

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid samples based on sample dry weight.

CleanHarbors

QUALITY CONTROL

REPORT OF ANALYSIS

CHES LAB. NO. 9407054

The attached quality control data were generated during the analysis of these samples. All results have been generated in accordance with the procedures as stated in the Clean Harbors Environmental Services, Inc. Quality Assurance/Quality Control Manual and pertinent standard operating procedures, which are available for review. The attached has been submitted for informational purposes only.

CleanHarbors

Volatile Organics Blank - System C
by EPA Method 624 (ref. f)

Analysis Date: 07/14/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-Pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes

ND = Below practical quantitation limit (PQL)
* = mg/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 97%
Toluene-d8: 104%
p-BFB: 92%

Acceptance Criteria:

Water	Soil
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%

CleanHarbors

Volatile Organics Blank - System C
by EPA Method 624 (ref. f)

Analysis Date: 07/15/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.
Acetone	0.020	ND	1,2-Dichloropropane	0.005	ND
Benzene	0.005	ND	cis-1,3-Dichloropropene	0.005	ND
Bromodichloromethane	0.005	ND	trans-1,3-Dichloropropene	0.005	ND
Bromoform	0.005	ND	Ethylbenzene	0.005	ND
Bromomethane	0.010	ND	2-Hexanone	0.005	ND
2-Butanone	0.020	ND	Methylene chloride	0.020	ND
Carbon disulfide	0.010	ND	4-Methyl-2-Pentanone	0.005	ND
Carbon tetrachloride	0.005	ND	Methyl-t-butylether (MTBE)	0.010	ND
Chlorobenzene	0.005	ND	Styrene	0.005	ND
Chloroethane	0.010	ND	1,1,2,2-Tetrachloroethane	0.005	ND
2-Chloroethyl vinyl ether	0.010	ND	Tetrachloroethene	0.005	ND
Chloroform	0.005	ND	Toluene	0.005	ND
Chloromethane	0.010	ND	1,1,1-Trichloroethane	0.005	ND
Dibromochloromethane	0.005	ND	1,1,2-Trichloroethane	0.005	ND
Dibromoethane (EDB)	0.005	ND	Trichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND	Trichlorofluoromethane	0.005	ND
1,2-Dichloroethane	0.005	ND	Vinyl acetate	0.010	ND
1,1-Dichloroethene	0.005	ND	Vinyl chloride	0.010	ND
trans-1,2-Dichloroethene	0.005	ND	Total xylenes	0.005	ND

Notes

ND = Below practical quantitation limit (PQL)
* = mg/l

QA/QC

Surrogate Recoveries:

1,2-Dichloroethane-d4: 101%
Toluene-d8: 102%
p-BFB: 93%

Acceptance Criteria:

Water	Soil
76-114%	70-121%
88-110%	84-138%
86-115%	59-113%

Semi-Volatile Base/Neutral Extractable Organics Blank - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*	Parameter	PQL*	Conc.
Acenaphthene	0.33	ND	Dimethylphthalate	0.33	ND
Acenaphthylene	0.33	ND	Di-n-butylphthalate	0.33	ND
Anthracene	0.33	ND	2,4-Dinitrotoluene	0.33	ND
Benzo(a)anthracene	0.33	ND	2,6-Dinitrotoluene	0.33	ND
Benzo(a)pyrene	0.33	ND	Di-n-octylphthalate	0.33	ND
Benzo(b)fluoranthene	0.33	ND	Fluoranthene	0.33	ND
Benzo(g,h,i)perylene	0.33	ND	Fluorene	0.33	ND
Benzo(k)fluoranthene	0.33	ND	Hexachlorobenzene	0.33	ND
Bis(2-chloroethoxy)methane	0.33	ND	Hexachlorobutadiene	0.33	ND
Bis(2-chloroethyl)ether	0.33	ND	Hexachlorocyclopentadiene	0.33	ND
Bis(2-chloroisopropyl)ether	0.33	ND	Hexachloroethane	0.33	ND
Bis(2-ethylhexyl)phthalate	0.67	ND	Indeno(1,2,3-cd)pyrene	0.33	ND
4-Bromophenyl phenyl ether	0.33	ND	Isophorone	0.33	ND
Butylbenzylphthalate	0.33	ND	2-Methylnaphthalene	0.33	ND
4-Chloroaniline	0.33	ND	Naphthalene	0.33	ND
2-Chloronaphthalene	0.33	ND	2-Nitroaniline	1.7	ND
4-Chlorophenyl phenyl ether	0.33	ND	3-Nitroaniline	1.7	ND
Chrysene	0.33	ND	4-Nitroaniline	1.7	ND
Dibenzo(a,h)anthracene	0.33	ND	Nitrobenzene	0.33	ND
Dibenzofuran	0.33	ND	N-Nitroso-di-n-propylamine	0.33	ND
1,2-Dichlorobenzene	0.33	ND	N-Nitrosodiphenylamine	0.33	ND
1,3-Dichlorobenzene	0.33	ND	Phenanthrene	0.33	ND
1,4-Dichlorobenzene	0.33	ND	Pyrene	0.33	ND
3,3'-Dichlorobenzidine	0.67	ND	1,2,4-Trichlorobenzene	0.33	ND
Diethylphthalate	0.33	ND			

Notes

ND = Below practical quantitation limit (PQL)
* = mg/kg based on sample weight as received

QA/QC

Surrogate Recoveries:

Nitrobenzene-d5: 68 %
2-Fluorobiphenyl: 72 %
Terphenyl-d14: 74 %

Acceptance Criteria:

Water	Soil
35-114%	23-120%
43-116%	30-115%
33-141%	18-137%

Semi-Volatile Acid Extractable Organics Blank - System A
by EPA Method 3550/8270 (ref. c)

Extraction Date: 07/06/94
Analysis Date: 07/13/94

Parameter	PQL*	Conc.*
4-Chloro-3-methylphenol	0.33	ND
2-Chlorophenol	0.33	ND
2,4-Dichlorophenol	0.33	ND
2,4-Dimethylphenol	0.33	ND
4,6-Dinitro-2-methylphenol	1.7	ND
2,4-Dinitrophenol	1.7	ND
2-Methylphenol	0.33	ND
4-Methylphenol	0.33	ND
2-Nitrophenol	0.33	ND
4-Nitrophenol	1.7	ND
Pentachlorophenol	1.7	ND
Phenol	0.33	ND
2,4,5-Trichlorophenol	1.7	ND
2,4,6-Trichlorophenol	1.7	ND

Notes

ND = Below practical quantitation limit (PQL)
* = mg/kg based on sample weight as received

QA/QC

Surrogate Recoveries:	Acceptance Criteria: Water	Acceptance Criteria: Soil
2-Fluorophenol: 70 %	21-100%	25-121%
Phenol-d5: 79 %	10-94%	24-113%
2,4,6-Tribromophenol: 80 %	10-123%	19-122%

Client: Clean Harbors, Inc.

CHES Lab #: 9407054

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/11/94
Analysis Date: 07/13/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	95.3%	78-148%

CleanHarbors

Client: Clean Harbors, Inc.

CHES Lab #: 9407054

Polychlorinated Biphenyls (PCBs) Blank
by EPA Method 3540/8080 (ref. c)

Extraction Date: 07/12/94
Analysis Date: 07/14/94

Parameter	PQL	Concentration	Units
PCB - Aroclor 1016	0.1	ND	mg/kg
PCB - Aroclor 1221	0.1	ND	mg/kg
PCB - Aroclor 1232	0.1	ND	mg/kg
PCB - Aroclor 1242	0.1	ND	mg/kg
PCB - Aroclor 1248	0.1	ND	mg/kg
PCB - Aroclor 1254	0.1	ND	mg/kg
PCB - Aroclor 1260	0.1	ND	mg/kg

Notes: ND = Below practical quantitation limit (PQL)
Soil/solid sample results based on sample dry weight.

QA/QC

Surrogate Recovery		Acceptance Criteria
Hexabromobenzene:	88.0%	78-148%

Client: Clean Harbors, Inc.

CHES Lab #: 9407054

BLANK ANALYSIS

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	ND	07/07/94	07/09/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

Client: Clean Harbors, Inc.

CHES Lab #: 9407054

BLANK ANALYSIS

Parameter	PQL*	Result*	Extraction Date	Analysis Date	Method Number and Reference
Petroleum Hydrocarbon Oil & Grease by IR	10	ND	07/08/94	07/11/94	503D/503E,B(b)

Notes: ND = Below practical quantitation limit (PQL)
* = mg/kg
Soil/solid samples based on sample dry weight

CleanHarbors

5 7/8

Clean Harbors Analytical Services, Inc., 325 Wood Rd., Braintree, MA 02184 | CHAIN OF CUSTODY RECORD | Sample Custodian — (617) 849-1800 | Page 1 of 1

Client: Environmental Resources Mgmt. Project Name: Chem Waste Work Order/P.O. # H05071.00.01 Date 6-30-94

Report To: Gina Dixon Address: 11817 Canon Blvd. Suite 308 Newport News VA 23606 Phone # (804) 873-4823

Date Samples Collected: 6-30-94 by: Donna Caldwell /ERM Date Samples Received: 7/5/94

Airbill/Bill of Lading? Y N NOTE: Samples received unpreserved will be preserved upon arrival at CHAS Samples were Preserved Unpreserved

PS 7/5/94

Sample I.D.	Sampling Information: Date	Time	Station Location	Sample Matrix	Analysis: TPH (IR)	BNA 8270	VOA 8240	PCB 8080					# of con	CHAS Sample # 9407054
S-4	6304	9:20	Truck Parking	Soil	✓	✓	✓	✓					2	01A, 0
S-3	6304	9:40	Truck Wash	Soil	✓	✓	✓	✓					2	02A, 0
S-2	6304	10:10	Roll off	Soil	✓	✓	✓	✓					2	03A, 0
S-7	6304	10:45	Empty Drum Storage	Soil	✓	✓	✓	✓					2	04A, 0
S-1	6304	11:10	Tank Farm	Soil	✓	✓	✓	—					2	05A, 0
S-5	6304	12:15	Temporary Tank Area	Soil	✓	✓	✓	✓					2	06A, 0
S-8	6304	12:45	Storm Water Drain	Soil	✓	✓	✓	✓					2	07A, 0
S-6	6304	3:05	Soil Stockpile	Soil	✓	✓	✓	✓					3	08A, 0, X

	VOA Vial	Glass Bottle	Plastic Bottle	Pres.	Volume

Relinquished by: Donna Caldwell
Date: 6-30-94 Time: 3:30

Received by: FedEx
Date: Time:

Relinquished by: FedEx
Date: 7/5/94 Time: 10:30

Received by: [illegible]
Date: 7/5/94 Time: 10:30

Preservation Key: A — Acidified with
B — Filtered, C — Sample chilled, D — NaOH,
E — NaThiosulfate, W — Sample Ambient, F — Other

REMARKS/COMMENTS (Sample storage, nonstandard bottles, cautions, special instructions)

Standard laboratory turnaround time is 2 weeks from date of receipt. Accelerated turnaround may be assessed a surcharge.
Accelerated turnaround requested:
Confirmed by: Surcharge

Location of samples R4, R1022

Turnaround 24 Hrs 48 Hrs 1 Week 2 Weeks Other

CHI 119

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • BRAINTREE, MA 02184-7599

Via Federal Express

February 27, 1997

Ms. Lisa Ellis
Virginia Department of Environmental Quality
Office of Permitting Management, 4th Floor
629 East Main Street
Richmond, VA 23219

Re: Clean Harbors Environmental Services, Inc.
EPA ID No. VAD988175055
RCRA Part B License Application

Dear Ms. Ellis:

In accordance with the Department's Part B call-in letter dated August 1, 1996, Clean Harbors Environmental Services, Inc. (CHESI) is pleased to submit the RCRA Part B License Application for its hazardous waste treatment and storage facility located in Prince George, VA.

Today's submittal includes one (1) original-signature version and two (2) copies of a 3-volume set which constitutes the text, tables, and appendices of CHESI's RCRA Part B License Application. The Application follows the Department's standard application format, and per the Department's call-in letter, includes information with respect to Solid Waste Management Units (SWMU's) and RCRA Air Emission Subparts AA and BB. Please note that a Permit Application Fee in the amount of $9,720 was previously submitted to the Department (copy enclosed).

Also please note that per the Department's instructions, one set of the Application is being forwarded to Mr. Robert Graves at USEPA Region III.

If you have any questions regarding this Application, please do not hesitate to contact me at (617) 849-1800, extension 1278.

Sincerely,

Peter W. Egan

Peter Egan
Corporate Compliance Manager

Enclosure

cc: Robert Graves, USEPA Region III

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
http://www.deq.state.va.us

Thomas L. Hopkins
Director

(804) 698-4000
1-800-592-5482

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 18, 1998

Received 3/23/98

Peter W. Egan
Corporate Compliance Manager
Clean Harbors
Environmental Services, Inc.
P.O. Box 850327
Braintree, MA 02185-0327

RE: Clean Harbors Facility
Prince George, Virginia
EPA ID VAD 988 175 055
Part B Application Revision
Technical Review

Dear Mr. Egan:

The revised Part B Permit Application was received by the Department of Environmental Quality (DEQ) on October 21, 1997. In accordance with the *Virginia Hazardous Waste Management Regulations* [VHWMR], as codified in Title 9 of the *Virginia Administrative Code* Agency 20, Chapter 60 [9 VAC 20-60-10, et seq.], the Office of Waste Permitting has completed the first technical review of the Part B Permit Application for the referenced facility. Based on the information submitted, revision of the Part B Application is necessary.

The review comments are attached in Appendix A. Please review these comments and revise the application as requested. Submit the revision and information within 30 days of receipt of this letter. Additionally, please submit a disk file copy of the revised permit application [WordPerfect 6.1 or lower, or Word 6.0 formats are preferred]. If additional time is required,

please submit a request for extension 10 days prior to the requested response date. If there are any questions or concerns regarding this review letter, please contact me at (804) 698-4206.

Sincerely,

Debra A. Miller

Debra A. Miller
Environmental Engineer Senior
Office of Waste Permitting

Appendices
cc: Robert Greaves, EPA III (3HW90)
Claire Ballard, DEQ [w/out Appendices]
Moe Habibi, DEQ-PRO
Melissa Porterfield, DEQ [w/out Appendices]
Central Files

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 850327 • BRAINTREE, MA 02185-0327
(617) 849-1800

FACSIMILE TRANSMISSION (804-698-4234)

April 7, 1998

To: Debra Miller, Office of Waste Permitting

From: Peter Egan, Clean Harbors

Re: Wastewater Treatment Plant Exclusion

Debra,

I found the Federal Register which discusses the wastewater treatment plant exclusion. Vol 53, No. 171, Friday September 2, 1988, page 34079. It indicates that wastewater treatment plants excluded under 40 CFR 270.1(c)(2)(v) can accept hazardous waste from off site. The analagous Virginia regulation (9 VAC 20-60-970 B.5) appears to mirror the federal rule.

I have attached a copy of the FR preamble.

Please review and we can discuss next time we talk.

Thanks

74:26 is given with the understanding that the State will revise as necessary its regulations to comply with Federal requirements after the decision in the *NRDC* v. *Thomas* remand is made. Today's action approves revisions to the existing NSR program.

EPA finds good cause exists for making the action taken in this notice immediately effective because the implementation plan revisions are already in effect under State law or regulation. EPA's approval poses no additional regulatory burden.

Under 5 U.S.C. 605(b), I certify that this SIP revision will not have a significant economic impact on a substantial number of small entities. (See 46 FR 8709.)

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by November 1, 1988. This action may not be challenged later in proceedings to enforce its requirements. (see 307(b)(2).)

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12291.

List of Subjects in 40 CFR Part 52

Air pollution control, Particulate matter, Sulfur oxides, Incorporation by reference.

Note: Incorporation by reference of the State Implementation Plan for the State of South Dakota was approved by the Director of the Federal Register on July 1, 1982.

Date: August 18, 1988.

Lee M. Thomas,

Administrator.

Part 52 Chapter I, Title 40 of the *Code of Federal Regulations* is amended as follows:

PART 52—[AMENDED]

Subpart QQ—South Dakota

1. The authority citation for Part 52 continues to read as follows:

Authority: 42 U.S.C. 7401–7642.

2. Section 52.2170 is amended by adding paragraph (c)(11) to read as follows:

§ 52.2170 Identification of plan.

* * * * *

(c) * * *

(11) On January 28, 1988, the Governor submitted a plan revision (1) updating citations to Federal regulations in the South Dakota air pollution control regulations (Administrative Rules of South Dakota 74:26), (2) adopting new ambient air quality standards for particulates (PM_{10}), (3) revising the State administrative procedures for handling permit hearings and contested cases, and (4) correcting deficiencies in the stack height regulations.

(i) Incorporation by reference

(A) Revisions to the Administrative Rules of South Dakota (ARSD) 74:26:01:12, ARSD 74:26:01:35, ARSD 74:26:01:37, ARSD 74:26:01:64, ARSD 74:26:08 through ARSD 74:26:23, inclusive, and addition of a new section, ARSD 74:26:02:35, were revised through November 24, 1987.

3. Add a new § 52.2180.

§ 52.2180 Stack height regulations.

The State of South Dakota has committed to revise its stack height regulations should EPA complete rulemaking to respond to the decision in *NRDC* v. *Thomas*, 838 F.2d 1224 (DC Cir. 1988). In a letter to Douglas M. Skie, EPA, dated May 11, 1988, Joel C. Smith, Administrator, Office of Air Quality and Solid Waste, stated:

"* * * We are submitting this letter to allow EPA to continue to process our current SIP submittal with the understanding that if EPA's response to the NRDC remand modifies the July 8, 1985 regulations, EPA will notify the State of the rules that must be changed to comport with the EPA's modified requirements. The State of South Dakota agrees to make the appropriate changes."

[FR Doc. 88–19165 Filed 9–1–88; 8:45 am]

BILLING CODE 6560–50–M

[FRL 3436-7]

40 CFR Parts 260, 264, 265, and 270

Hazardous Waste Management System; Standards for Hazardous Waste Storage and Treatment Tank Systems

AGENCY: U.S. Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is today providing an interpretation of certain terms and provisions, and correcting typographical and other errors, that originally appeared in the revised final standards for hazardous waste tank systems (51 FR 25422, July 14, 1986). These interpretations and amendments are being made in response to litigation and numerous inquiries that the Agency has received on certain aspects of the final rule.

EFFECTIVE DATE: September 2, 1988.

FOR FURTHER INFORMATION CONTACT: The RCRA/Superfund Hotline, (800) 424-9346 (in Washington, DC, call (202) 382-3000)), or William J. Kline, (202) 382-7917, Office of Solid Waste (OS-322), U.S. Environmental Protection Agency 401 M Street SW., Washington, DC 20460.

SUPPLEMENTARY INFORMATION:

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III. Correction of Typographical Errors
IV. Compliance with Administrative Procedure Act Requirements

I. Background

On July 14, 1986, EPA issued a final rule that revised the standards for hazardous waste storage and treatment tank systems (51 FR 25422). Since then, the Agency has received requests for interpretation of a number of terms or provisions of the final rule, and has found several typographical errors in the rule. In addition, the revised tank system standards were challenged by industry petitioners in *Edison Electric Institute (EEI), et al.* v. *U.S. EPA*, No. 86-1549 (D.C. Circuit). This notice provides additional interpretation and clarification of the final rule, both in response to public inquiry and in settlement of the *EEI* litigation. This notice also corrects a number of typographical errors.

II. Discussion of Issues Requiring Interpretation

Three major areas of the final rule require further clarification: (1) The exemptions for wastewater treatment systems and elementary neutralization tank systems, (2) issues concerning secondary containment requirements, and (3) the applicability of the immediate response exemption under 40 CFR 265.1(c)(11) and 270.1(c)(3).

53 FR Sept 2, 1988

page 34079

A. Scope of the Exemptions for Wastewater Treatment/Elementary Neutralization Tank Systems

1. Effect of Revised Tank System Standards on Wastewater Treatment/Elementary Neutralization Units

On November 17, 1980, EPA promulgated an amendment to the hazardous waste standards that suspended applicability of the requirements in 40 CFR Parts 122 (now codified in Part 270), 264, and 265 to owners and operators of wastewater treatment tanks and elementary neutralization tanks (45 FR 76074).

In the July 14, 1986, revised standards for hazardous waste tank systems (51 FR 25422), the Agency, in response to evidence indicating a high incidence of failures in piping and other equipment ancillary to tanks, made a special effort to focus on the proper management of such equipment. Thus, all equipment that is ancillary to the tank and used "to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal on-site, or to a point of shipment for disposal off-site" was made subject to the revised standards (see definition of "ancillary equipment", 40 CFR 260.10). EPA used the term "tank system" to emphasize that both the tank and its ancillary equipment must be managed in accordance with the revised standards. EPA has received several inquiries regarding the extent to which the term "tank system" might result in previously exempt wastewater treatment/neutralization tanks being regulated by the revised hazardous waste tank system standards.

In the July 14, 1986, rulemaking, the Agency had no intention of altering the scope of the November 17, 1980, exemption for such units as provided under 40 CFR 264.1(g)(6), 265.1(c)(10), and 270.1(c)(2)(v) by subjecting the ancillary equipment of such exempt tanks to regulation. EPA attempted to make this point clear in the preamble of the revised standards (see 51 FR 25462). However, numerous parties believe the preamble language is still ambiguous. This ambiguity was also an issue in the *EEI* litigation. To add to the confusion of the status of these exemptions, EPA inadvertently neglected to amend the 40 CFR 260.10 definitions of "elementary neutralization unit" and "wastewater treatment unit" to reflect the Agency's intent to address hazardous waste tank systems, rather than simply hazardous waste tanks. In this notice, EPA corrects this oversight.

In order to remove any remaining ambiguity over this issue, EPA is today amending the wastewater treatment and elementary neutralization unit definitions to clarify that the exemptions apply to the tank systems, not just the tank. The only additional equipment intended to be covered under the revised standards was ancillary equipment that is associated with a regulated hazardous waste storage or treatment tank.

Thus, if a wastewater treatment or elementary neutralization unit is not subject to the RCRA Subtitle C hazardous waste management standards, the ancillary equipment connected to the exempted unit is likewise not subject to the Subtitle C standards. Similarly, the exemptions apply to sumps that meet the definition of a tank in 40 CFR 260.10 and that are used for the purpose of conveying hazardous wastewater to an exempted wastewater treatment or elementary neutralization unit (including conveyance by way of intermediate sumps, tanks, and holding ponds) since such sumps are ancillary equipment to the exempted tanks. Also, the revised hazardous waste tank system standards do not apply to ancillary equipment that is associated with hazardous waste management units other than storage or treatment tanks (*e.g.*, surface impoundments).

2. Clarification of "Wastewater Treatment Unit"

One of the conditions under 40 CFR 260.10 for qualifying as a wastewater treatment unit is that the unit must be part of a wastewater treatment facility that is subject to regulation under either section 402 or section 307(b) of the Clean Water Act. EPA has received numerous inquiries regarding the meaning of the term "wastewater treatment facility."

Based on EPA's property-boundary interpretation of the term "facility" under RCRA and the purpose of the exemption, which is to exclude tank systems subject to regulation under the Clean Water Act, it is EPA's position that in order for a wastewater treatment unit to be covered by the exemption, it must be part of an on-site wastewater treatment facility. Accordingly, any hazardous waste tank system that is used to store or treat the wastewater that is managed at an on-site wastewater treatment facility with an National Pollution Discharge Elimination System (NPDES) permit or that discharges to a Publicly Owned Treatment Works (POTW), is exempt from the RCRA regulations. Whether the wastewater is conveyed from the tank system directly to the treatment unit or indirectly by way of intermediate sumps, tanks or holding ponds does not affect the applicability of the exemption. For example, this exemption would apply if a sump is used to collect the rinse from periodic cleaning of utility boilers and this wastewater is then conveyed to a wastewater treatment unit at the same facility. Also, the means of conveyance of the waste between storage and treatment does not affect the applicability of this exemption. The applicability of the exemption does not depend on whether the wastewater is piped or trucked, or conveyed in any other manner to the wastewater treatment facility within the boundaries of the facility generating the wastewater. Likewise, the applicability of the exemption does not depend on whether the on-site wastewater treatment facility also treats wastewater generated off-site.

However, any tank system that was employed in managing wastewater at a facility prior to its off-site transfer to another location, whether or not the off-site location includes an NPDES permitted wastewater treatment facility, or a facility that discharges to a POTW sewer system, is not covered by this exemption.

EPA intends that this exemption apply to any tank system that manages hazardous wastewater and is dedicated for use with an on-site wastewater treatment facility. However, if a tank system, in addition to being used in conjunction with an on-site wastewater treatment facility, is used on a routine or occasional basis to store or treat a hazardous wastewater prior to shipment off-site for treatment, storage, or disposal, it is not covered by this exemption. Unless the tank system otherwise qualifies for some other exemption, it would be subject to the revised standards for hazardous waste tank systems.

A final clarification of this exemption concerns an on-site wastewater treatment facility that has no discharge to surface water. As previously stated in 45 FR 76078 (November 17, 1980), the wastewater treatment unit exemption is intended to cover only tank systems that are part of a wastewater treatment facility that (1) produces a treated wastewater effluent which is discharged into surface waters or into a POTW sewer system and therefore is subject to the NPDES or pretreatment requirements of the Clean Water Act, or (2) produces no treated wastewater effluent as a direct result of such requirements. This exemption is not intended to apply to wastewater

treatment units that are not required to obtain an NPDES permit because they do not discharge treated effluent.

B. Issues Regarding Secondary Containment Requirements

The Agency has also received numerous requests for interpretation of the regulatory provisions concerning the secondary containment requirements. The areas of confusion include; the meaning of welded flanges, the exemption for certain types of joints and connections, the exemption of above-ground sealless valves, the extent of required leak detection for concrete liners, and the secondary containment of pressurized piping with automatic shut-off devices.

1. Welded Flanges

The primary purpose of a flange is to enable connection of piping to vessels, pumps, valves, and other equipment. A flange connection provides an easy means of removing equipment from the pipe system for inspection, maintenance, repair, or replacement. Like other piping connections, flanges can be joined to piping by two basic techniques: threaded joints or metallurgical bonds (e.g., welds). If a piece of equipment is connected to piping by a threaded joint, it may be difficult to remove the equipment without disassembly of a portion of the piping system or without loosening other pipe-threaded connections. If the equipment is welded to the pipe, the pipe must be cut to remove the equipment. In contrast, equipment joined together with flanged connections can be easily removed by unbolting the flanges.

In §§ 264.193(f) and 265.193(f) of the revised hazardous waste tank system standards, EPA exempted welded flanges from the requirement to have secondary containment as long as the flanges were visually inspected on a daily basis. Numerous questions have been raised as to the intended meaning of the term "welded flange" because EPA did not define this term in the July 14, 1986, final rules. Apparently, several different meanings can be attributed to the term.

A term typically used in national piping codes, "welded flange" refers to welding only the piping to the flange. The flange-to-flange seal is achieved by mechanical seals, such as gaskets and o-rings. The flanges are usually held together by bolts. For a perfect seal, the bolt holes would have to be eliminated, and a circumferential weld made at the flange-to-flange joint. However, EPA is not aware of any national standards or codes that discuss this type of weld. And, most important, such a weld would defeat the purpose of the flange—i.e., to allow easy coupling and uncoupling of equipment from the piping system.

In exempting welded flanges from secondary containment, EPA intended to discourage the use of threaded joints, which EPA believes are susceptible to more frequent and larger quantities of releases than welded flanges. Threaded joints are used in metals where the walls are thick enough to withstand considerable pressure and corrosion after reduction in thickness due to threading. Threading is not a precise machining operation, and filler materials such as "pipe dope" are necessary to block the spiral leakage path.

Several characteristics of threaded joints make them more susceptible to leakage than welded flanges. Threads notch the pipe and reduce its strength and fatigue resistance. Enlargement and contraction of the flow passage at threaded joints creates turbulence. Thus, corrosion and erosion may be aggravated at the point where a pipe has already been thinned by threading. The tendency of pipe wrenches to crush pipes and fittings limits the torque available for tightening threaded joints thereby possibly excluding the necessary amount of tightening. For low-pressure systems, a slight rotation in the joint may be used to impart flexibility to the system, but this same rotation may cause leaks to develop in higher-pressure systems. In some metals, galling (i.e., a wearing down) occurs when threaded joints are disassembled.

Flanged joints come in a wide variety of types and facings. Welded-neck flanges provide joints as strong as the pipe under all types of static and cyclic loading. Slip-on, socket-weld, and lap-joint flanges provide joints as strong as the pipe under static loading but have lower resistance to cyclic stresses.

EPA realizes that flanged connections cannot be considered equivalent to an all-welded pipe system without flanges and will, therefore, pose a potential leak source. However, welded flanges eliminate, in EPA's opinion, the point of most probable leakage—i.e., the threaded pipe connection to the flange. With respect to potential leakage, flanges are superior to threaded connections because of the higher quality and more consistent workmanship and supervision associated with flange assembly and because of the inherent problems with threaded joints discussed above. While the flange-to-flange seals can leak, the occurrence of leakage from flanges is much lower than from threaded joints due to the larger seal surface area for the flange joint (a large surface on flange face versus a few sealing threads in the threaded connection). Also, with proper selection of bolt materials and washers, the mechanical seal can be kept under continuous compressive force, whereas the threaded joint relies on thread sealing compound to compensate for the contraction and expansion of the threaded joint. In any case, if a leak does occur in the mechanical seal it can be easily detected visually and corrected immediately.

Weld-neck and lap-joint flanges are preferable to socket-weld and slip-on flanges because they provide the greatest resistance to static stress. Socket-weld and slip-on flanges provide a lesser degree of structural integrity because the welds may eventually weaken, particularly from cyclical stress (vibration, hammering, opening/closing of valves, etc.). Nevertheless, EPA believes that any of these welded flanges, if properly specified, installed, inspected, and maintained in accordance with American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), and other piping component standards, and if properly managed in compliance with the revised hazardous waste tank system standards (e.g., compatibility, design certification, installation certification, inspections, and response to leak/spills), should pose a very low risk of leakage. For example, a properly designed piping system should take cyclical loading into account and use pulsation dampers, flex joints, expansion joints, etc., to eliminate or substantially minimize the effect of cyclical stresses. Thus, as specified on the revised tank system rules, the Agency believes secondary containment is not necessary for aboveground welded flanges (i.e., welded at the joint of the pipe to the flange) that are visually inspected on a daily basis. For the purpose of §§ 264.193(f) and 265.193(f) EPA interprets the term "Welded flange" to mean weld-neck, lap-joint, slip-on, and socket-weld flanges.

2. Applicability of Exemption for Certain Types of Joints and Connections

Since promulgation of the revised tank system standards, EPA has received numerous inquiries regarding the intended scope of the exemption from secondary containment for welded joints and welded connections. For example, inquirers have requested clarification on the applicability of this exemption to plastic piping connections, and compression, soldered/brazed, and other tubing connections.

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Thomas L. Hopkins
Director

(804) 698-4000
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April 15, 1998

Peter W. Egan
Corporate Compliance Manager
Clean Harbors
Environmental Services, Inc.
1501 Washington Street
P.O. Box 850327
Braintree, MA 02185-0327

RE: Clean Harbors Permitting of Interim Status Tank
EPA ID VAD988175055

Dear Mr. Egan:

Your facsimile transmission was received April 7, 1998. This fax discussed the wastewater treatment exemption from permitting under the *Virginia Hazardous Waste Management Regulations* [VHWMR], as codified under Title 9 of the *Virginia Administrative Code*, Agency 20, Chapter 60, Section 970.B.5 [9 VAC 20-60-970.B.5].

As noted in the September 2, 1988, Federal Register's preamble for this rule [Vol. 53, No. 171, Page 34079-34080], the wastewater treatment unit exemption from permitting is not dependent on whether the on-site wastewater treatment facility also treats wastewater generated off-site. However, it is incorrect to apply this permitting exemption to your facility. Clean Harbors' facility accepts hazardous waste from off-site generators. The manifest regulations of 9 VAC 20-60-280.F require that generators identify the "designated" facility to which they are sending their hazardous waste. A designated facility is, per 9 VAC 20-60-10, a hazardous waste treatment, storage or disposal facility which; (1) has received a permit or interim status from EPA; (2) has received a permit or interim status from Virginia; or (3) is regulated under 9 VAC 20-60-130 or Part XIII of the VHWMR. Wastewater

treatment facilities, except for POTWs which are permitted-by-rule, do not meet the necessary requirements for a designated facility. Consequently, generators may not send their hazardous waste to these facilities. Permitting of the interim status storage/treatment tank, T-101, will still be required in order for Clean Harbors to continue to receive hazardous waste from off-site generators.

It is hoped that this information clarifies the wastewater treatment exemption and generator manifesting issue. If you have any further concerns, please contact me at (804) 698-4206.

Sincerely,

Debra A. Miller

Debra A. Miller
Environmental Engineer Senior

cc: Moe Habibi, DEQ-PRO

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 850327 • BRAINTREE, MA 02185-0327
(617) 849-1800

Via facsimile transmission (804-698-4234)

April 16, 1998

Ms. Debra A. Miller, Environmental Engineer Senior
Office of Waste Permitting
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240

Re: Wastewater Treatment Plant Exemption

Dear Ms. Miller:

As a followup to our recent discussions regarding the exemption for waste water treament units pursuant to 9 VAC 20-60-970 B.5., I have attached correspondence from the state of Ohio for your information. Obviously, Ohio statutes and regulations are not applicable in the Commonwealth of Virginia, but I wanted to bring these documents to your attention. As the cover letter indicates, the Ohio statute conflicts with the Ohio regulatory code, and the statute prevails.

CHESI would likely utilize the exemption at 9 VAC 20-60-970 B.5. for accepting waste from off-site sources if it was available.

Sincerely,

Peter W. Egan
Corporate Compliance Manager

OhioEPA
State of Ohio Environmental Protection Agency

Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
FAX (614) 644-2329

George V. Voinovich
Governor

Donald R. Schregardus
Director

INTER-OFFICE COMMUNICATION

TO: Paul Pardi, Group Leader, DHWM, SWDO

FROM: Art Coleman thru Jennifer Hille, RCRA TAS, DHWM, CO

SUBJECT: Status Of Wastewater Treatment Unit Receiving Off-Site Hazardous Wastes
GM Delco OHD004255410

DATE: March 3, 1993

This is to acknowledge your October 6, 1992 IOC to Jennifer Hille requesting clarification on the regulatory status of a wastewater treatment plant (WWTP) in Kettering, Ohio, proposing to receive off-site shipments of hazardous wastes. You referenced and attached two contrasting Federal documents on the applicability of the "wastewater treatment exclusion" to WWTPs treating off-site shipments of hazardous wastes.

As you are probably well aware, the applicability of CWA and RCRA requirements is not always clear-cut. Most of the exclusions codified in OAC for hazardous wastewater disposal to CWA-WWTPs apply to point source discharges [See OAC 3745-51-03 (A)(2)(e)(i),(ii),(v), 3745-51-04(A)(1)(a),(2)]. Hazardous wastewater is subject to regulation prior to discharge into a CWA-WWTP, including accumulation, storage, treatment, and transporting the waste to the ultimate disposal/treatment facility.

In her February 24 letter to Mr. Sparta, Marcia Williams stated that generators must send shipments of hazardous wastes to a "designated facility." The Ohio Revised Code (ORC), under 3734.02 (F)(5), allows waste to be treated at a facility that is not subject to permit requirements. Wastewater treatment units are exempt from permitting requirements under 3745-50-45 (c)(5) and 3745-65-01 (c)(8) of the Ohio Administrative Code (OAC). Even though this facility does not meet the strict definition of a "designated" facility, the statute overrules the rules in this case. The GM facility is allowed to accept hazardous wastewater as long as it is manifested, they keep records, and the sludge is characterized by all the codes that apply to the incoming waste.

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It should also be mentioned that although hazardous wastes may be treated by a CWA-WWTP, the treatment must comply with LDR standards.

If you require further assistance, please contact me or Jennifer Hille at 4-2956.

ALC/pas

cc: Edward A. Kitchen, Manager, RCRA TAS, DHWM, CO
Jennifer Hille, Environmental Supervisor, RCRA TAS, DHWM, CO
Judy Brazis, RCRA TAS, DHWM, CO
Central File

INTEROFFICE COMMUNICATION

TO: Jennifer Hille, TAS, DHWM, CO

FROM: Paul Pardi, DHWM, SWDO

SUBJECT: Regulatory Interpretation

DATE: October 6, 1992

****

Find attached an interpretation request from Delco-Kettering. I have referred to the U.S. EPA Policy Compendium to obtain information on this topic. As you can see by the attached letters from U.S. EPA, the feds have offered contradictory interpretations (no real surprise).

Because of the uncertainty caused by the U.S. EPA documents, I am requesting your assistance in responding to the interpretations request from GM.

Please let me know if the state has already issued guidance on this subject, or if we need to work together to formulate "policy". Also let me know if your workload will not allow you to act on this in a timely manner. Thanks in advance for your help with this. Please call me if you need additional information.

PDP:nys

RECEIVED
OHIO EPA

OCT 1 3 1992

DIV. OF

Delco Chassis

Delco Chassis Division
General Motors Corporation
2000 Forrer Boulevard
Post Office Box 1042
Dayton, Ohio 45401-1042

Area Code 513 455-5000

RECEIVED
OHIO EPA
AUG 12 1992
SOUTHWEST DISTRICT

August 07, 1992

Mr. Paul Pardi
Division of Solid and Hazardous Waste Management
Southwest District Office
Ohio Environmental Protection Agency
40 South Main Street
Dayton, Ohio 45402

Subject: Treatment of Wastes from Off-Site Sources

Dear Mr. Pardi:

Delco Chassis operates a wastewater treatment facility at its Forrer Boulevard plant in Kettering, Ohio. This facility meets the definition of a "Wastewater Treatment Unit" (see 40 CFR 260.10 and OAC 3745-50-10) that is subject to regulation under either section 402 or section 307 (b) of the Clean Water Act. As such, the tank system used within this wastewater treatment facility is exempt from RCRA regulations, including permitting (see OAC 3745-50-45(c)).

On September 02, 1988, US EPA issued a clarification of the definition of a "wastewater treatment unit" (see attached). In this clarification, USEPA indicated

> "the applicability of the exemption does not depend on whether the on-site wastewater treatment facility also treats wastewater generated off-site".

A written interpretation was also obtained from USEPA (see attached) reinforcing this clarification by stating

> "as long as the facility accepting and treating the wastewater from an off-site source does not violate the conditions of its NPDES permit or pretreatment agreement, it is the Agency's intent to allow a facility to operate with this exemption".

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

9452.1987(0

FEB 24 1987

1987

Mr. Phillip J. Sparta
Assistant Managing Director
Environmental Technology Southeast
1819 Albert Street
Jacksonville, Florida 32202

Dear Mr. Sparta:

This is in response to your letter of January 21, 1987 regarding the participation of a wastewater treatment unit in the manifest system.

Although you were previously informed that a generator of hazardous waste may designate a wastewater treatment unit on the manifest as a facility allowed to accept this waste, we now believe the previous interpretation is incorrect. In particular, under 40 CFR §§264.1(g)(6) and 270.1(c)(2), the substantive requirements of Part 264 and the permit requirements of Part 270 do not apply to owners or operators of wastewater treatment units. The interim status requirements of Part 265 also do not apply to such units. (See 40 CFR §265.1(c)(10).)

EPA's manifest system regulations (40 CFR §§262.20(b) and 263.21) require that a generator send hazardous waste only to a "designated facility." As provided in §260.10, a designated facility must have an EPA permit, interim status, or a permit from an authorized State, or must be a facility regulated under the special provisions of §261.6(c)(2). Because wastewater treatment facilities, other than publicly owned treatment works (POTWs) that are permitted-by-rule under §270.60, meet none of these conditions, they cannot be listed as a designated facility, and therefore, they cannot receive hazardous waste from off-site.

I apologize for any problems our previous interpretation may have caused you. Please contact Michael Petruska or Carolyn Barley of my staff at (202) 475-8551 if you have additional questions on this matter.

Sincerely,

Marcia W. Williams
Director
Office of Solid Waste

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 9431.1989(

SEP 26 1989

Mr. Jeffrey J. Wells
Regulatory Consultant
HazMat Environmental Group Inc.
P.O. Box 676
Buffalo, NY 14217

1989

Dear Mr. Wells:

Thank you for your letter of July 24, 1989, requesting verification of your interpretation regarding the wastewater treatment unit exemption. Specifically, you are seeking confirmation that a facility, which operates a wastewater treatment unit that discharges to a POTW as defined in section 260.10, may also receive and treat wastewater from any off-site source and not affect the exemption under which the unit operates.

As you pointed out in your letter, in the September 2, 1988 Federal Register notice (53 FR 34079), EPA stated that the applicability of the exemption does not depend on whether the on-site wastewater treatment facility also treats wastewater generated off-site. As long as the facility accepting and treating the wastewater from an off-site source does not violate the conditions of its NPDES permit or pretreatment agreement, it is the Agency's intent to allow a facility to operate with this exemption. Of course, as also discussed in the same notice, any storage or treatment tank system used to manage the wastewater at the generator's facility, prior to shipment to the off-site exempted wastewater treatment unit, is not eligible for the wastewater treatment unit exemption.

Please accept my apology for the delay in responding to your letter. If you should have any further questions regarding this issue, please call me at (202) 475-9614.

Sincerely,

William J. Kline
Environmental Scientist

cc: Chester Ozzman, PSPD
Kirsten Engel, OGC
Randy Hill, OGC

TYPE OF BASIC MANAGEMENT UNIT	TYPE OF FACILITY	FEE
Incinerator	On-site and satellite	5,000
	Off-site	10,000
Other forms of treatment	On-site, off-site, and satellite	1,000

In determining the annual permit fee required by this section, the director shall not require additional payments for multiple units of the same method of storage, treatment, or disposal, or for individual units that are used for both storage and treatment. A facility using more than one method of storage, treatment, or disposal shall pay the permit fee indicated by the schedule for each such method.

The director shall not require the payment of that portion of an annual permit fee of any permit holder that would apply to a hazardous waste management unit for which a permit has been issued but for which construction has not yet commenced. Once construction has commenced, the director shall require the payment of a part of the appropriate fee indicated by the schedule that bears the same relationship to the total fee that the number of days remaining until the next anniversary date at which payment of the annual permit fee is due bears to three hundred sixty-five.

The director, by rules adopted in accordance with Chapters 119. and 3745. of the Revised Code, shall prescribe procedures for collecting the annual permit fee established by this division and may prescribe other requirements necessary to carry out this division.

(F) No person shall store, treat, or dispose of hazardous waste identified or listed under this chapter and rules adopted under it, regardless of whether generated on or off the premises where the waste is stored, treated, or disposed of, or transport or cause to be transported any hazardous waste identified or listed under this chapter and rules adopted under it to any other premises, except at or to any of the following:

(1) A hazardous waste facility operating under a permit issued in accordance with this chapter;

(2) A facility in another state operating under a license or permit issued in accordance with the "Resource Conservation and Recovery Act of 1976," 90 Stat. 2806, 42 U.S.C.A. 6921, as amended;

(3) A facility in another nation operating in accordance with the laws of that nation;

(4) A facility holding a permit issued pursuant to Title I of the "Marine Protection, Research, and Sanctuaries Act of 1972," 86 Stat. 1052, 33 U.S.C.A. 1401, as amended;

(5) A hazardous waste facility that is operating under a permit by rule under rules adopted by the director of environmental protection or that is not subject to permit requirements under rules adopted by the director. The director may adopt, modify, suspend, or repeal rules in accordance with Chapter 119. of the Revised Code for the purposes of this division. Any rules adopted by the director for those purposes shall be consistent with and equivalent to the regulations promulgated by the administrator of the United States environmental protection agency under the "Resource Conservation and Recovery Act of 1976," 90 Stat. 2806, 42 U.S.C.A. 6921, as amended, except as otherwise provided in this chapter.

(G) The director may by order exempt any person generating, storing, treating, disposing of, or transporting solid wastes, other than infectious wastes, or hazardous waste, in such quantities or under such circumstances that, in the determination of the director, are unlikely to adversely affect the public health or safety or the environment from any requirement to obtain a permit or license or comply with the manifest system or other requirements of this chapter. Any such exemption shall be consistent with and equivalent to the regulations adopted by the administrator of the United States environmental protection agency under the "Resource Conservation and Recovery Act of 1976," 90 Stat. 2806, 42 U.S.C.A. 6921, as amended, except as otherwise provided in this chapter.

(H) No person shall engage in filling, grading, excavating, building, drilling, or mining on land where a hazardous waste facility, or a solid waste facility, was operated without prior authorization from the director, who shall establish the procedure for granting such authorization by rules adopted in accordance with Chapter 119. of the Revised Code.

A public utility that has main or distribution lines above or below the land surface located on an easement or right-of-way across land where a solid waste facility was operated may engage in any such activity within the easement or right-of-way without prior authorization from the director for purposes of performing emergency repair or emergency replacement of its lines; of the poles, towers, foundations, or other structures supporting or sustaining any such lines; or of the appurtenances to those structures, necessary to restore or maintain existing public utility service. A public utility may enter upon any such easement or right-of-way without prior authorization from the director for purposes of performing necessary or routine maintenance of those portions of its existing lines; of the existing poles, towers, foundations, or other structures sustaining or supporting its lines; or of the appurtenances to any such supporting or sustaining structure, located on or above the land surface on any such easement or right-of-way. Within twenty-four hours after commencing any such emergency repair or replacement, or maintenance, work, the public utility shall notify the director or his authorized representative of those activities and shall provide such information regarding those activities as the director or his representative may request. Upon completion of the emergency repair or replacement, or maintenance, activities, the public utility shall restore any land of the solid waste facility disturbed by those activities to the condition existing prior to the commencement of those activities.

(I) No owner or operator of a hazardous waste facility shall, in the operation of the facility, cause, permit, or allow the emission therefrom of any particulate matter, dust, fumes, gas, mist, smoke, vapor, or odorous substance that, in the opinion of the director, unreasonably interferes with the comfortable enjoyment of life or property by persons living or working in the vicinity of the facility, or that is injurious to public health. Any such action is hereby declared to be a public nuisance.

(J) Notwithstanding any other provision of this chapter, in the event the director finds an imminent and substantial danger to public health or safety or the environment that creates an emergency situation requiring the immediate treatment, storage, or disposal of hazardous waste, the director may issue a temporary emergency permit to allow the treatment, storage, or disposal of the hazardous waste at a facility that is not otherwise authorized by a hazardous waste facility installation and operation permit to treat, store, or dispose of the waste. The emergency permit shall

Ohio STATUTE 3734.02(F)(5)

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET, P.O. BOX 850327, BRAINTREE, MA 02185-0327
(781) 849-1800

FAX COVER SHEET

TO: DEBRA MILLER VADEQ - WASTE PERMITTING

OF: VADEQ

FROM: PETER EGAN

TEL #: (781) 849-1800, ext. 1278

FAX #: (781)

DATE: 4-16-98

TOTAL PAGES (including cover): 9

COMMENTS:

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Dennis H. Treacy
Director

(804) 698-4000
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July 17, 1998

Peter W. Egan
Corporate Compliance Manager
Clean Harbors, Environmental Services, Inc.
P.O. Box 850327
Braintree, MA 02185-0327

RE: Wastewater Treatment Plant Exemption and Designated Facility Determination
Clean Harbors Part B Application Withdrawal and Closure Plan Submittal
EPA ID VAD988175055

Dear Mr. Egan:

The Part B Permit Application withdrawal request letter was received by the Virginia Department of Environmental Quality (DEQ) on July 8, 1998. As detailed in the letter, Clean Harbors has made a decision to not pursue permitting for its hazardous waste storage and treatment tank at their Prince George facility in Virginia and, therefore, has submitted a closure plan for the interim status units. At this time, the DEQ acknowledges withdrawal of the Part B permit application and will be reviewing the submitted closure plan for regulatory and technical merit within the next few weeks.

The submitted letter also requested further clarification of wastewater treatment units and how they relate to "designated facilities", as defined by the Virginia Hazardous Waste Management Regulations, as codified in Title 9 of the Virginia Administrative Code, Agency 20, Chapter 60, Section 10 [9 VAC 20-60-10]. Clean Harbors had previously posed this question and, by a letter dated April 15, 1998, the DEQ notified Clean Harbors of its decision. In that letter, the DEQ concluded that a wastewater treatment facility, other than a publicly owned treatment works that is permitted-by-rule under 9 VAC 20-60-1040, cannot be a "designated facility" because it would not meet the conditions for a designated facility, as specified in 9 VAC 20-60-10 [i.e., not have either a permit or interim status for hazardous waste management]. Hence, wastewater treatment facilities, which are exempt from hazardous waste permitting per 9 VAC 20-60-970, could not be allowed to accept hazardous waste from off-site generators for treatment as they could not be deemed designated facilities. This determination was in accordance with EPA Region III policy and was based on information obtained in the RCRA Compendium [a February 24, 1987, letter from Marcia Williams of EPA Region III].

Recently, EPA Region III has informed the DEQ that EPA has reversed their position on this matter. EPA Headquarters has retracted their February 1987 letter (see letter dated March 27, 1998, from Elizabeth A. Cotsworth, Acting Director of the Office of Solid Waste, to Mr. J. Dale Givens of the Louisiana Department of Environmental Quality) . The current EPA position, as explained in the attached letter dated June 12, 1998, is that a wastewater treatment facility can qualify as a designated facility under the federal regulations, as long as it continues to meet the definition of a wastewater treatment unit in 40 CFR 260.10, obtains an EPA Identification number, and follows the applicable hazardous waste manifest instructions. However, since Virginia is authorized to administer this portion of the RCRA programs, the decision will remain with the DEQ.

The DEQ has reviewed EPA Region III's June 12, 1998, letter and applicable attachments. Therefore, by this letter, the DEQ retracts its April 15, 1998, letter to Clean Harbors and determines that a wastewater treatment facility may be deemed a "designated facility" by off-site generators and, hence, may accept off-site hazardous waste for treatment at their facility. However, the wastewater treatment units must meet the definition of 9 VAC 20-60-10, the facility must have an appropriate EPA identification number, and the facility must comply with the hazardous waste manifesting requirements. repealed

I hope this information is helpful. If you have any questions about the content of this letter, please contact Debra Miller, Environmental Engineer Senior, of my office at (804) 698-4206.

Sincerely,

Hassan Vakili

Hassan Vakili
Director, Division of Waste Program Coordination

Attachment
cc: Moe Habibi, DEQ-PRO
Leslie Romanchik, DEQ
Lisa Ellis, DEQ
Debra Miller, DEQ

PM98-0444

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
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(617) 849-1800

Via Certified Mail - Return Receipt Requested (Z 203 373 527)
and via facsimile transmission (804-698-4234)

April 10, 1998

Ms. Debra A. Miller, Environmental Engineer Senior
Office of Waste Permitting
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240

Re: Revision of Part B Permit Application
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, VA 23875
EAP ID No. VAD 988 175 055

Dear Ms. Miller:

By correspondence dated March 18, 1998, received by Clean Harbors Environmental Services, Inc. (CHESI) on March 23, 1998, the Virginia Department of Environmental Quality (VADEQ) informed CHESI that a technical review of CHESI's Part B permit application has been conmpleted, and that a revision to the Part B is necessary.

This is to request additional time to respond to the VADEQ's comments included with the March 18, 1998 correspondence. In order to properly respond to all of the VADEQ's comments, CHESI must employ outside consultants to evaluate several aspects of CHESIs tank farm, secondary containment unit, and surrounding area. CHESI anticipates that these activities will take several months, and requests an additional 90 days to respond to the VADEQ's technical review comments. If granted this extension, CHESI would submit all comments by July 23, 1998.

CHESI appreciates the VADEQ's consideration and cooperation in this matter. Please don't hesitate to contact me at 781-849-1800 extension 1278 if you have any questions or require additional information.

Yours truly,

Peter W. Egan
Corporate Compliance Manager

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Thomas L. Hopkins
Director

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April 15, 1998

Peter W. Egan
Corporate Compliance Manager
Clean Harbors
Environmental Services, Inc.
1501 Washington Street
P.O. Box 850327
Braintree, MA 02185-0327

RE: Clean Harbors Permitting of Interim Status Tank
EPA ID VAD988175055

Dear Mr. Egan:

Your facsimile transmission was received April 7, 1998. This fax discussed the wastewater treatment exemption from permitting under the *Virginia Hazardous Waste Management Regulations* [VHWMR], as codified under Title 9 of the *Virginia Administrative Code*, Agency 20, Chapter 60, Section 970.B.5 [9 VAC 20-60-970.B.5].

As noted in the September 2, 1988, Federal Register's preamble for this rule [Vol. 53, No. 171, Page 34079-34080], the wastewater treatment unit exemption from permitting is not dependent on whether the on-site wastewater treatment facility also treats wastewater generated off-site. However, it is incorrect to apply this permitting exemption to your facility. Clean Harbors' facility accepts hazardous waste from off-site generators. The manifest regulations of 9 VAC 20-60-280.F require that generators identify the "designated" facility to which they are sending their hazardous waste. A designated facility is, per 9 VAC 20-60-10, a hazardous waste treatment, storage or disposal facility which; (1) has received a permit or interim status from EPA; (2) has received a permit or interim status from Virginia; or (3) is regulated under 9 VAC 20-60-130 or Part XIII of the VHWMR. Wastewater

treatment facilities, except for POTWs which are permitted-by-rule, do not meet the necessary requirements for a designated facility. Consequently, generators may not send their hazardous waste to these facilities. Permitting of the interim status storage/treatment tank, T-101, will still be required in order for Clean Harbors to continue to receive hazardous waste from off-site generators.

It is hoped that this information clarifies the wastewater treatment exemption and generator manifesting issue. If you have any further concerns, please contact me at (804) 698-4206.

Sincerely,

Debra A. Miller

Debra A. Miller
Environmental Engineer Senior

cc: Moe Habibi, DEQ-PRO

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 850327 • BRAINTREE, MA 02185-0327
(617) 849-1800

Via facsimile transmission (804-698-4234)

April 16, 1998

Ms. Debra A. Miller, Environmental Engineer Senior
Office of Waste Permitting
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240

Re: Wastewater Treatment Plant Exemption

Dear Ms. Miller:

As a followup to our recent discussions regarding the exemption for waste water treament units pursuant to 9 VAC 20-60-970 B.5., I have attached correspondence from the state of Ohio for your information. Obviously, Ohio statutes and regulations are not applicable in the Commonwealth of Virginia, but I wanted to bring these documents to your attention. As the cover letter indicates, the Ohio statute conflicts with the Ohio regulatory code, and the statute prevails.

CHESI would likely utilize the exemption at 9 VAC 20-60-970 B.5. for accepting waste from off-site sources if it was available.

Sincerely,

Peter W. Egan
Corporate Compliance Manager

OhioEPA
State of Ohio Environmental Protection Agency

Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
FAX (614) 644-2329

George V. Voinovich
Governor

Donald R. Schregardus
Director

INTER-OFFICE COMMUNICATION

TO: Paul Pardi, Group Leader, DHWM, SWDO

FROM: Art Coleman thru Jennifer Hille, RCRA TAS, DHWM, CO

SUBJECT: Status Of Wastewater Treatment Unit Receiving Off-Site Hazardous Wastes
GM Delco OHD004255410

DATE: March 3, 1993

This is to acknowledge your October 6, 1992 IOC to Jennifer Hille requesting clarification on the regulatory status of a wastewater treatment plant (WWTP) in Kettering, Ohio, proposing to receive off-site shipments of hazardous wastes. You referenced and attached two contrasting Federal documents on the applicability of the "wastewater treatment exclusion" to WWTPs treating off-site shipments of hazardous wastes.

As you are probably well aware, the applicability of CWA and RCRA requirements is not always clear-cut. Most of the exclusions codified in OAC for hazardous wastewater disposal to CWA-WWTPs apply to point source discharges [See OAC 3745-51-03 (A)(2)(e)(i),(ii),(v), 3745-51-04(A)(1)(a),(2)]. Hazardous wastewater is subject to regulation prior to discharge into a CWA-WWTP, including accumulation, storage, treatment, and transporting the waste to the ultimate disposal/treatment facility.

In her February 24 letter to Mr. Sparta, Marcia Williams stated that generators must send shipments of hazardous wastes to a "designated facility." The Ohio Revised Code (ORC), under 3734.02 (F)(5), allows waste to be treated at a facility that is not subject to permit requirements. Wastewater treatment units are exempt from permitting requirements under 3745-50-45 (c)(5) and 3745-65-01 (c)(8) of the Ohio Administrative Code (OAC). Even though this facility does not meet the strict definition of a "designated" facility, the statute overrules the rules in this case. The GM facility is allowed to accept hazardous wastewater as long as it is manifested, they keep records, and the sludge is characterized by all the codes that apply to the incoming waste.

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It should also be mentioned that although hazardous wastes may be treated by a CWA-WWTP, the treatment must comply with LDR standards.

If you require further assistance, please contact me or Jennifer Hille at 4-2956.

ALC/pas

cc: Edward A. Kitchen, Manager, RCRA TAS, DHWM, CO
Jennifer Hille, Environmental Supervisor, RCRA TAS, DHWM, CO
Judy Brazis, RCRA TAS, DHWM, CO
Central File

INTEROFFICE COMMUNICATION

TO: Jennifer Hille, TAS, DHWM, CO

FROM: Paul Pardi, DHWM, SWDO

SUBJECT: Regulatory Interpretation

DATE: October 6, 1992

****

Find attached an interpretation request from Delco-Kettering. I have referred to the U.S. EPA Policy Compendium to obtain information on this topic. As you can see by the attached letters from U.S. EPA, the feds have offered contradictory interpretations (no real surprise).

Because of the uncertainty caused by the U.S. EPA documents, I am requesting your assistance in responding to the interpretations request from GM.

Please let me know if the state has already issued guidance on this subject, or if we need to work together to formulate "policy". Also let me know if your workload will not allow you to act on this in a timely manner. Thanks in advance for your help with this. Please call me if you need additional information.

PDP:nys

RECEIVED
OHIO EPA

OCT 1 3 1992

DIV. OF

Delco Chassis

Delco Chassis Division
General Motors Corporation
2000 Forrer Boulevard
Post Office Box 1042
Dayton, Ohio 45401-1042

Area Code 513 455-5000

RECEIVED
OHIO EPA
AUG 12 1992
SOUTHWEST DISTRICT

August 07, 1992

Mr. Paul Pardi
Division of Solid and Hazardous Waste Management
Southwest District Office
Ohio Environmental Protection Agency
40 South Main Street
Dayton, Ohio 45402

Subject: Treatment of Wastes from Off-Site Sources

Dear Mr. Pardi:

Delco Chassis operates a wastewater treatment facility at its Forrer Boulevard plant in Kettering, Ohio. This facility meets the definition of a "Wastewater Treatment Unit" (see 40 CFR 260.10 and OAC 3745-50-10) that is subject to regulation under either section 402 or section 307 (b) of the Clean Water Act. As such, the tank system used within this wastewater treatment facility is exempt from RCRA regulations, including permitting (see OAC 3745-50-45(c)).

On September 02, 1988, US EPA issued a clarification of the definition of a "wastewater treatment unit" (see attached). In this clarification, USEPA indicated

> "the applicability of the exemption does not depend on whether the on-site wastewater treatment facility also treats wastewater generated off-site".

A written interpretation was also obtained from USEPA (see attached) reinforcing this clarification by stating

> "as long as the facility accepting and treating the wastewater from an off-site source does not violate the conditions of its NPDES permit or pretreatment agreement, it is the Agency's intent to allow a facility to operate with this exemption".

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

9452.1987(01)

FEB 24 1987

1987

Mr. Phillip J. Sparta
Assistant Managing Director
Environmental Technology Southeast
1819 Albert Street
Jacksonville, Florida 32202

Dear Mr. Sparta:

This is in response to your letter of January 21, 1987 regarding the participation of a wastewater treatment unit in the manifest system.

Although you were previously informed that a generator of hazardous waste may designate a wastewater treatment unit on the manifest as a facility allowed to accept this waste, we now believe the previous interpretation is incorrect. In particular, under 40 CFR §§264.1(g)(6) and 270.1(c)(2), the substantive requirements of Part 264 and the permit requirements of Part 270 do not apply to owners or operators of wastewater treatment units. The interim status requirements of Part 265 also do not apply to such units. (See 40 CFR §265.1(c)(10).)

EPA's manifest system regulations (40 CFR §§262.20(b) and 263.21) require that a generator send hazardous waste only to a "designated facility." As provided in §260.10, a designated facility must have an EPA permit, interim status, or a permit from an authorized State, or must be a facility regulated under the special provisions of §261.6(c)(2). Because wastewater treatment facilities, other than publicly owned treatment works (POTWs) that are permitted-by-rule under §270.60, meet none of these conditions, they cannot be listed as a designated facility, and therefore, they cannot receive hazardous waste from off-site.

I apologize for any problems our previous interpretation may have caused you. Please contact Michael Petruska or Carolyn Barley of my staff at (202) 475-8551 if you have additional questions on this matter.

Sincerely,

Marcia W. Williams
Director
Office of Solid Waste

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 9431.1989(2)

SEP 26 1989

Mr. Jeffrey J. Wells
Regulatory Consultant
HazMat Environmental Group Inc.
P.O. Box 676
Buffalo, NY 14217

1989

Dear Mr. Wells:

Thank you for your letter of July 24, 1989, requesting verification of your interpretation regarding the wastewater treatment unit exemption. Specifically, you are seeking confirmation that a facility, which operates a wastewater treatment unit that discharges to a POTW as defined in section 260.10, may also receive and treat wastewater from any off-site source and not affect the exemption under which the unit operates.

As you pointed out in your letter, in the September 2, 1988 Federal Register notice (53 FR 34079), EPA stated that the applicability of the exemption does not depend on whether the on-site wastewater treatment facility also treats wastewater generated off-site. As long as the facility accepting and treating the wastewater from an off-site source does not violate the conditions of its NPDES permit or pretreatment agreement, it is the Agency's intent to allow a facility to operate with this exemption. Of course, as also discussed in the same notice, any storage or treatment tank system used to manage the wastewater at the generator's facility, prior to shipment to the off-site exempted wastewater treatment unit, is not eligible for the wastewater treatment unit exemption.

Please accept my apology for the delay in responding to your letter. If you should have any further questions regarding this issue, please call me at (202) 475-9614.

Sincerely,

William J. Kline
Environmental Scientist

cc: Chester Oszman, PSPD
Kirsten Engel, OGC
Randy Hill, OGC

TYPE OF BASIC MANAGEMENT UNIT	TYPE OF FACILITY	FEE
Incinerator	On-site and satellite	5,000
	Off-site	10,000
Other forms of treatment	On-site, off-site, and satellite	1,000

In determining the annual permit fee required by this section, the director shall not require additional payments for multiple units of the same method of storage, treatment, or disposal, or for individual units that are used for both storage and treatment. A facility using more than one method of storage, treatment, or disposal shall pay the permit fee indicated by the schedule for each such method.

The director shall not require the payment of that portion of an annual permit fee of any permit holder that would apply to a hazardous waste management unit for which a permit has been issued but for which construction has not yet commenced. Once construction has commenced, the director shall require the payment of a part of the appropriate fee indicated by the schedule that bears the same relationship to the total fee that the number of days remaining until the next anniversary date at which payment of the annual permit fee is due bears to three hundred sixty-five.

The director, by rules adopted in accordance with Chapters 119. and 3745. of the Revised Code, shall prescribe procedures for collecting the annual permit fee established by this division and may prescribe other requirements necessary to carry out this division.

(F) No person shall store, treat, or dispose of hazardous waste identified or listed under this chapter and rules adopted under it, regardless of whether generated on or off the premises where the waste is stored, treated, or disposed of, or transport or cause to be transported any hazardous waste identified or listed under this chapter and rules adopted under it to any other premises, except at or to any of the following:

(1) A hazardous waste facility operating under a permit issued in accordance with this chapter;

(2) A facility in another state operating under a license or permit issued in accordance with the "Resource Conservation and Recovery Act of 1976," 90 Stat. 2806, 42 U.S.C.A. 6921, as amended;

(3) A facility in another nation operating in accordance with the laws of that nation;

(4) A facility holding a permit issued pursuant to Title I of the "Marine Protection, Research, and Sanctuaries Act of 1972," 86 Stat. 1052, 33 U.S.C.A. 1401, as amended;

Ohio STATUTE 3734.02(F)(5)

(5) A hazardous waste facility that is operating under a permit by rule under rules adopted by the director of environmental protection or that is not subject to permit requirements under rules adopted by the director. The director may adopt, modify, suspend, or repeal rules in accordance with Chapter 119. of the Revised Code for the purposes of this division. Any rules adopted by the director for those purposes shall be consistent with and equivalent to the regulations promulgated by the administrator of the United States environmental protection agency under the "Resource Conservation and Recovery Act of 1976," 90 Stat. 2806, 42 U.S.C.A. 6921, as amended, except as otherwise provided in this chapter.

(G) The director may by order exempt any person generating, storing, treating, disposing of, or transporting solid wastes, other than infectious wastes, or hazardous waste, in such quantities or under such circumstances that, in the determination of the director, are unlikely to adversely affect the public health or safety or the environment from any requirement to obtain a permit or license or comply with the manifest system or other requirements of this chapter. Any such exemption shall be consistent with and equivalent to the regulations adopted by the administrator of the United States environmental protection agency under the "Resource Conservation and Recovery Act of 1976," 90 Stat. 2806, 42 U.S.C.A. 6921, as amended, except as otherwise provided in this chapter.

(H) No person shall engage in filling, grading, excavating, building, drilling, or mining on land where a hazardous waste facility, or a solid waste facility, was operated without prior authorization from the director, who shall establish the procedure for granting such authorization by rules adopted in accordance with Chapter 119. of the Revised Code.

A public utility that has main or distribution lines above or below the land surface located on an easement or right-of-way across land where a solid waste facility was operated may engage in any such activity within the easement or right-of-way without prior authorization from the director for purposes of performing emergency repair or emergency replacement of its lines; of the poles, towers, foundations, or other structures supporting or sustaining any such lines; or of the appurtenances to those structures, necessary to restore or maintain existing public utility service. A public utility may enter upon any such easement or right-of-way without prior authorization from the director for purposes of performing necessary or routine maintenance of those portions of its existing lines; of the existing poles, towers, foundations, or other structures sustaining or supporting its lines; or of the appurtenances to any such supporting or sustaining structure, located on or above the land surface on any such easement or right-of-way. Within twenty-four hours after commencing any such emergency repair or replacement, or maintenance, work, the public utility shall notify the director or his authorized representative of those activities and shall provide such information regarding those activities as the director or his representative may request. Upon completion of the emergency repair or replacement, or maintenance, activities, the public utility shall restore any land of the solid waste facility disturbed by those activities to the condition existing prior to the commencement of those activities.

(I) No owner or operator of a hazardous waste facility shall, in the operation of the facility, cause, permit, or allow the emission therefrom of any particulate matter, dust, fumes, gas, mist, smoke, vapor, or odorous substance that, in the opinion of the director, unreasonably interferes with the comfortable enjoyment of life or property by persons living or working in the vicinity of the facility, or that is injurious to public health. Any such action is hereby declared to be a public nuisance.

(J) Notwithstanding any other provision of this chapter, in the event the director finds an imminent and substantial danger to public health or safety or the environment that creates an emergency situation requiring the immediate treatment, storage, or disposal of hazardous waste, the director may issue a temporary emergency permit to allow the treatment, storage, or disposal of the hazardous waste at a facility that is not otherwise authorized by a hazardous waste facility installation and operation permit to treat, store, or dispose of the waste. The emergency permit shall

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET, P.O. BOX 850327, BRAINTREE, MA 02185-0327
(781) 849-1800

FAX COVER SHEET

TO: DEBRA MILLER VADEQ - WASTE PERMITTING

OF: VADEQ

FROM: PETER EGAN

TEL #: (781) 849-1800, ext. 1278

FAX #: (781) _____

DATE: 4-16-98

TOTAL PAGES (including cover): 9

COMMENTS: _____

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Overnight Mail

July 7, 1998

Ms. Debra A. Miller, Environmental Engineer Senior
Office of Waste Permitting
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240

Re: Withdrawal From Part B Licensing Process
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, VA 23875
EPA ID No. VAD 988 175 055

Dear Ms. Miller:

Clean Harbors Environmental Services, Inc. (CHESI), located at 7515 Harvest Road, Prince George, Virginia currently operates a hazardous waste storage and treatment facility in accordance with the hazardous waste management facility interim status standards at 9 VAC 20-60-520.

By correspondence dated August 1, 1996, the Virginia Department of Environmental Quality (VADEQ) requested that CHESI submit a Part B permit application.

By correspondence dated February 27, 1997, CHESI submitted a RCRA Part B License Application to the VADEQ. During 1997, the VADEQ reviewed the application for administrative completeness, submitted comments to CHESI, and CHESI responded to the comments. By correspondence dated December 8, 1997, the VADEQ notified CHESI that the application was administratively complete, and that a technical review of the application would commence. By correspondence dated March 18, 1998, the VADEQ submitted comments from its technical review to CHESI. CHESI requested, and received from the VADEQ, an extension until July 8, 1998 to respond to the technical comments.

This is to notify the VADEQ that CHESI intends to withdraw from the Part B permit application process and proceed with interim status closure of the facility. Please find enclosed with this notification a revised interim status Closure Plan.

I understand that the United States Environmental Protection Agency - Region III (USEPA) recently issued a revised interpretation or policy regarding the applicability of "Designated Facility" (defined in 40 CFR 260.10) to wastewater treatment units which manage hazardous waste in accordance with the exemption at 40 CFR 270.1(c)(2)(v).

As you recall, CHESI recently inquired as to whether its Prince George facility could accept hazardous waste from off-site generators for treatment in its wastewater treatment system without having to obtain a Part B permit. The VADEQ's response, dated April 15, 1998, indicated that the exemption at 9 VAC 20-60-970.B.5 does not apply for shipments of waste which are shipped on a manifest from off-site generators. Could you please let me know if the recent USEPA ruling changes the VADEQ's position on allowance of an exempt wastewater treatment unit to accept off-site shipments of hazardous waste.

Please don't hesitate to contact me at 781-849-1800 extension 1278 if you have any questions.

Yours truly,

Peter W. Egan
Corporate Compliance Manager

cc: Joseph Kotlinski, Clean Harbors
Gary Young, Clean Harbors

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
http://www.deq.state.va.us

Dennis H. Treacy
Director

(804) 698-4000
1-800-592-5482

July 17, 1998

Peter W. Egan
Corporate Compliance Manager
Clean Harbors, Environmental Services, Inc.
P.O. Box 850327
Braintree, MA 02185-0327

RE: Wastewater Treatment Plant Exemption and Designated Facility Determination
Clean Harbors Part B Application Withdrawal and Closure Plan Submittal
EPA ID VAD988175055

Dear Mr. Egan:

The Part B Permit Application withdrawal request letter was received by the Virginia Department of Environmental Quality (DEQ) on July 8, 1998. As detailed in the letter, Clean Harbors has made a decision to not pursue permitting for its hazardous waste storage and treatment tank at their Prince George facility in Virginia and, therefore, has submitted a closure plan for the interim status units. At this time, the DEQ acknowledges withdrawal of the Part B permit application and will be reviewing the submitted closure plan for regulatory and technical merit within the next few weeks.

The submitted letter also requested further clarification of wastewater treatment units and how they relate to "designated facilities", as defined by the Virginia Hazardous Waste Management Regulations, as codified in Title 9 of the Virginia Administrative Code, Agency 20, Chapter 60, Section 10 [9 VAC 20-60-10]. Clean Harbors had previously posed this question and, by a letter dated April 15, 1998, the DEQ notified Clean Harbors of its decision. In that letter, the DEQ concluded that a wastewater treatment facility, other than a publicly owned treatment works that is permitted-by-rule under 9 VAC 20-60-1040, cannot be a "designated facility" because it would not meet the conditions for a designated facility, as specified in 9 VAC 20-60-10 [i.e., not have either a permit or interim status for hazardous waste management]. Hence, wastewater treatment facilities, which are exempt from hazardous waste permitting per 9 VAC 20-60-970, could not be allowed to accept hazardous waste from off-site generators for treatment as they could not be deemed designated facilities. This determination was in accordance with EPA Region III policy and was based on information obtained in the RCRA Compendium [a February 24, 1987, letter from Marcia Williams of EPA Region III].

Recently, EPA Region III has informed the DEQ that EPA has reversed their position on this matter. EPA Headquarters has retracted their February 1987 letter (see letter dated March 27, 1998, from Elizabeth A. Cotsworth, Acting Director of the Office of Solid Waste, to Mr. J. Dale Givens of the Louisiana Department of Environmental Quality) . The current EPA position, as explained in the attached letter dated June 12, 1998, is that a wastewater treatment facility can qualify as a designated facility under the federal regulations, as long as it continues to meet the definition of a wastewater treatment unit in 40 CFR 260.10, obtains an EPA Identification number, and follows the applicable hazardous waste manifest instructions. However, since Virginia is authorized to administer this portion of the RCRA programs, the decision will remain with the DEQ.

The DEQ has reviewed EPA Region III's June 12, 1998, letter and applicable attachments. Therefore, by this letter, the DEQ retracts its April 15, 1998, letter to Clean Harbors and determines that a wastewater treatment facility may be deemed a "designated facility" by off-site generators and, hence, may accept off-site hazardous waste for treatment at their facility. However, the wastewater treatment units must meet the definition of 9 VAC 20-60-10; the facility must have an appropriate EPA identification number, and the facility must comply with the hazardous waste manifesting requirements. repealed

I hope this information is helpful. If you have any questions about the content of this letter, please contact Debra Miller, Environmental Engineer Senior, of my office at (804) 698-4206.

Sincerely,

Hassan Vakili

Hassan Vakili
Director, Division of Waste Program Coordination

Attachment
cc: Moe Habibi, DEQ-PRO
Leslie Romanchik, DEQ
Lisa Ellis, DEQ
Debra Miller, DEQ

PM98-0444

FYI

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

RECEIVED

JUN 19 1998

DEQ - WASTE DIVISION

June 12, 1998

Hassan Vakili
Director of Waste Operations
Division of Program Support and Evaluations
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, VA 23240-0009

Dear Mr. Vakili:

The Virginia Department of Environmental Quality (VADEQ) has requested the assistance of the EPA Region 3 office in resolving regulatory issues associated with the operation of the MARPOL, Incorporated Facility (MARPOL) in Chesapeake, VA. Specifically, VADEQ is interested in knowing whether the MARPOL facility can function as a "designated facility" as defined in 40 CFR §260.10 (and the equivalent State regulation) and, therefore, accept hazardous waste without interim status or a RCRA Part B permit.

In attempting to address this issue, the Region conducted an inspection of the MARPOL facility on April 30, 1996 (copy of the inspection report is enclosed as "Enclosure 1"), and consulted with the Office of Solid Waste and the Office of General Counsel in EPA Headquarters.

For regulatory purposes under the Federal RCRA program, "designated facility" means a hazardous waste treatment, storage, or disposal facility which (1) has received a permit (or interim status) in accordance with the requirements of 40 CFR Parts 270 and 124, (2) has received a permit (or interim status) from a State authorized in accordance with 40 CFR Part 271, or (3) is regulated under 40 CFR §261.6(c)(2) or Subpart F of 40 CFR part 266, and (4) has been designated on the manifest by the generator pursuant to 40 CFR §260.20.

VIRGINIA'S "DESIGNATED FACILITY" DETERMINATION

In the VADEQ letter to Patrick A. Genzler, Esq., dated September 2, 1993, VADEQ determined that MARPOL qualified as a "designated facility" because it planned to operate its facility in such a way that it would be regulated under the provisions in VHWMR §3.3.C.2 of the Virginia program (the equivalent provision to 40 CFR §261.6(c)(2) in the Federal RCRA

program). This determination by VADEQ was based on the information provided by MARPOL at that time and on certain understandings about the way in which MARPOL planned to conduct its operation (i.e., the economic significance to MARPOL of the sale of recovered oil), and on certain limitations (i.e., MARPOL's ability to process hazardous oily wastewaters without storage prior to treatment and MARPOL's non-acceptance of used oil).

Under the Federal RCRA program, if MARPOL recycles recyclable materials without storing them before these materials are recycled, MARPOL would be regulated under 40 CFR §261.6 ("Requirements for recyclable materials"), and would be subject to a limited number of management provisions contained in 40 CFR § 261.6(c)(2), including:

- Notification requirements
- Manifest requirements
- Section 261.6(d).

VADEQ's "designated facility" determination was based on information regarding the then current circumstances of the MARPOL operation. MARPOL supplied information to VADEQ that approximately 20% of its gross revenue was derived from the sale of recovered oil, and that the recovered oil constituted approximately 10% of the total volume of oily wastewaters managed at the MARPOL facility. Additionally, VADEQ clearly put MARPOL on notice that if circumstances regarding its operation changed, VADEQ would reexamine MARPOL's eligibility for the exclusion.

The Region has concluded that VADEQ made a reasonable decision based on the circumstances of the MARPOL operation at the time that this determination was made. MARPOL made a claim that it qualified as a "designated facility" based on the legitimacy of its recycling activities. Furthermore, a permit for storage was not required because hazardous wastes were off-loaded directly into its recycling process (i.e. there was no on-site storage of wastes prior to recycling).

WASTEWATER TREATMENT UNIT AS A "DESIGNATED FACILITY"

Staff at VADEQ raised the issue as to whether or not a RCRA exempt wastewater treatment unit could qualify as a "designated facility" under the RCRA regulations, particularly in light of a February 24, 1987 letter from Marcia Williams, then Director of the Office of Solid Waste, to Phillip J. Sparta of Environmental Technology Southeast (copy of the letter is enclosed as "Enclosure 2"). In this letter, Ms. Williams concluded that a wastewater treatment facility, other than a publicly owned treatment works that is permitted-by-rule under 40 CFR 270.60, cannot be a "designated facility" because it would meet none of the conditions specified in the definition of "designated facility" found in 40 CFR §260.10.

More recently, EPA has reversed its position on this issue by retracting the February 24, 1987 letter to Phillip Sparta referenced above. The current Agency position is that a wastewater treatment unit (as defined in 40 CFR § 260.10) can qualify as a "designated facility" under federal regulations as long as it continues to meet the definition of a wastewater treatment unit in 40 CFR 260.10, obtains an EPA identification number, and follows the applicable hazardous waste manifest instructions. This position is explained in a letter dated March 27, 1998, from Elizabeth A. Cotsworth, Acting Director of the Office of Solid Waste to Mr. J. Dale Givens of the Louisiana Department of Environmental Quality (copy of the letter is enclosed as "Enclosure 3").

THE TYPE OF RECYCLABLE MATERIAL

It is my understanding that MARPOL has processed recyclable materials at its facility which may fall into different categories under the Federal RCRA program. Some of these materials may be properly classified as "off-specification commercial chemical products." If the materials processed at MARPOL are mixtures of petroleum products (either refined products or crude oil) and water, and if these materials are within the commercial chemical product definition, then the reclamation of these product materials is not defined as a waste management activity. The key to the proper classification of such mixtures is that one must know the source of the petroleum component. For example, oily process wastes do not fall under the definition of a commercial chemical product; therefore, oily process wastes and water mixtures would not be properly classified as an off-specification commercial chemical product. Since commercial chemical products being reclaimed are not solid wastes when used for their original intended purpose (and, therefore, are not hazardous wastes) the "designated facility" classification is not necessary for this activity. The reclamation of materials which are sludges or byproducts and which would be hazardous only because they exhibit a hazardous waste characteristic are similarly not defined as solid wastes. The only types of secondary materials that are defined as solid wastes when they are being legitimately reclaimed are materials which are spent materials, or are listed sludges or by-products, as these terms are defined in 40 CFR §261.1. MARPOL has the responsibility to provide sufficient information to support an off-specification commercial chemical product determination because 40 CFR §261.2(f) puts the burden on the company to demonstrate that materials are not solid wastes.

We have reviewed the inspection report of April 30, 1996 with regard to those materials at MARPOL that contain a potentially recyclable petroleum fraction. However, there is not sufficient detail to properly classify many of these materials as off-specification commercial chemical products, spent material, sludges (listed or characteristic) or byproducts (listed or characteristic). Therefore, we cannot provide you with a determination of which of these materials are or are not solid wastes when reclaimed.

END USE OF MATERIALS WHICH ARE BURNED FOR ENERGY RECOVERY

Staff at VADEQ also raised the issue as to whether, under the Federal RCRA program, off-specification commercial chemical products that are burned for energy recovery or are used to produce a fuel or are otherwise contained in fuels would be solid wastes if they were not burned for energy recovery in the exact manner as originally intended (i.e., off-specification gasoline recycled as a fuel in an internal combustion engine).

This has not been the Agency's policy. See, for example, the enclosed letter from EPA to Mr. John W. Osborne, United Beechcraft, Inc., dated February 6, 1995 (copy enclosed as "Enclosure 4"). EPA does not distinguish between different types of burning for energy recovery for purposes of determining the regulatory status of residual fuels under 40 CFR §261.2(c)(2)(ii).

While the specific end use of the recovered or reclaimed off-specification commercial chemical product is not critical as long as the original intended purpose of the commercial chemical product is as a fuel and the recovered or reclaimed material is being legitimately burned for energy recovery, an important question to answer is whether or not the material itself is actually an off-specification commercial chemical product. Although the regulatory language found at 40 CFR 261.2(c)(2)(ii) states that a commercial chemical product that is reclaimed is not a solid waste if it itself is a fuel only addresses commercial chemical products listed in 40 CFR §261.33, it is implicit in the rules that the same reasoning applies to commercial chemical products that are not listed (50 FR 14219; April 11, 1985).

CHANGES IN MARPOL'S OPERATIONS

As a result of conversations with staff at VADEQ and the inspection of the MARPOL facility conducted on April 30, 1996 by George Houghton of the Region's Environmental Services Division, it appears that the operation of this facility has changed somewhat since VADEQ's 1993 "designated facility" determination. MARPOL is now receiving a wider variety of materials for processing through its facility.

According to the inspection report, in addition to the marine-based materials that MARPOL was accepting in 1993, it now accepts land-based materials containing a hydrocarbon component. Some of these land-based materials are gasoline / water mixtures from filling stations or bulk storage facilities and JP4 / water mixtures from the Army and Air Force. These additional materials containing a hydrocarbon component likely have a flash point and a benzene content that would cause them to exhibit either the characteristic of ignitability or toxicity, or both..

Some of the materials which are described in the inspection report do not include a petroleum component (e.g. storm water, aqueous fire fighting foam (AFFF), truck stand washing waste, boiler treatment waste, and grey water from laundry, showers, etc.). Processing of materials without a petroleum component does not appear to involve the recovery of a usable product or regeneration. If this is the case, these materials would be wastewaters and, therefore, solid wastes. From the information in the inspection report, however, these wastewaters do not appear to be hazardous wastes either by listing or by characteristic.

In conclusion, EPA has now determined that wastewater treatment units are included within the definition of "designated facility" under the federal RCRA program. Because VADEQ is authorized to administer this portion of the RCRA program, it can have requirements that are more stringent than the federal program, and can impose additional requirements to insure adequate control of hazardous wastewaters.

If you have any questions about the content of this letter, please contact me or David Friedman of my staff at 215 / 566-3395.

Sincerely,

Maria Parisi Vickers

Maria Parisi Vickers,
Associate Director for RCRA
Waste and Chemicals Management Division

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
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(781) 849-1800
Visit our Website at www.cleanharbors.com

VIA OVERNIGHT DELIVERY

February 4, 2000

Ms. Debra A. Miller
Commonwealth of Virginia
Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

RE: PARTIAL CLOSURE REPORT AND CERTIFICATION
Clean Harbors Environmental Services, Inc.
7515 Harvest Road, Prince George, VA
EPA ID. Number VAD 988 175 055

Dear Ms. Miller:

On behalf of Clean Harbors Environmental Services, Inc. (CHESI), please find enclosed two (2) copies of the Partial Closure Report and Certification prepared for the CHESI facility located at 7515 Harvest Road, Prince George, VA.

This report details the closure of two (2) of three (3) hazardous waste management units at the above facility pursuant to the Closure Plan approved by the Virginia Department of Environmental Quality on September 21, 1999. This Partial Closure Report was prepared and certified by Mr. Robert Shaeffer, a Virginia professional engineer, of Dames & Moore.

If you have any questions regarding this submission, please feel free to contact me at 781-849-1800 extension 4139.

Sincerely,

Sean R. Devine
Corporate Compliance Manager

enclosures

cc: G. Young (CHESI)
R. Shaeffer (Dames & Moore)

DAMES & MOORE

A DAMES & MOORE GROUP COMPANY

5540 Falmouth Street, Suite 201
Richmond, Virginia 23230

HAZARDOUS WASTE MANAGEMENT UNIT

PARTIAL CLOSURE REPORT AND CERTIFICATION

Prepared for:

Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, Virginia

EPA ID Number VAD 988 175 055

January 28, 2000

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Figure 1 – Facility Site Plan
Figure 2 - Hazardous Waste Management Units

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A Work Permits
B Executed Waste Disposal Manifests
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1.0 INTRODUCTION

The Clean Harbors Environmental Services, Inc. (CHESI) facility is an interim status hazardous waste storage and treatment facility that operates a treatment facility for petroleum products and water mixtures. The facility currently has interim status for its hazardous waste storage units (HWMUs), which include Tank T-101 (15,000 gallon waste tank), an oil/water separator S-101, and the secondary containment system. Figure 1 depicts the facility layout.

Since the storage tank and oil water separator holds interim status and the facility does not intend to pursue permitting, closure per the Virginia Hazardous Waste Management Regulations (VHWMR) is necessary. CHESI therefore submitted a closure plan to the Virginia DEQ that was subsequently modified and approved by the DEQ on September 21, 1999. The approved Closure Plan provides for hazardous waste decontamination of the interim status HWMUs and the treatment of hazardous waste in accordance with all applicable regulations.

CHESI retained Dames & Moore to provide an independent registered Virginia professional engineer, as required by the approved Plan, to certify the closure activities. The certification report is presented in Section 4.0 of this document.

In Section 5.0 of the Closure Plan, the necessary components of the Closure Report and Certification are identified. Per Section 5.0 of the Closure Plan, the Closure Report shall contain, at a minimum, the following information:

a. A summary of closure activities for each unit;
b. If applicable, the depth of any excavation;
c. Results of all statistical analyses and sample calculations;
d. If performed, the risk assessment results and conclusions with sample calculations;
e. A summary sheet of all sampling results;
f. A copy of the lab-generated sampling analysis forms;
g. A summary of the QA/QC findings; and
h. A synopsis on the proper disposal of waste generated during closure activities.

This report addresses the applicable portions of the information identified above. Given the limited scope of the Partial Closure effort, none of the following activities were conducted, nor were necessary, to achieve partial closure of the two units addressed in this report:

- Excavation of soil or concrete;
- Sampling and analyses of water, soil or concrete for closure determination purposes;
- Statistical analyses, risk assessment or QA/QC efforts.

2.0 SUMMARY OF CLOSURE ACTIVITIES

Two of the three HWMUs referenced in the Plan have been closed in accordance with the Plan requirements: Tank T-101 and Oil Water Separator S-101. Figure 2 depicts the HWMU layout, relative to each other. A summary of closure activities for each of these units is presented below.

2.1 TANK T-101

Per the Plan, Tank T-101 was addressed first. Tank T-101 was a single-walled vertical cylindrical steel tank with a 15,000-gallon capacity. The tank was approximately 11 feet in diameter and 25 feet tall. There was a loading and transfer pump, piping, various control valves, a level indicator, and flame arrestor associated with the tank. A catwalk was mounted to the top of the tank, to allow access to the top manway. Two additional manways were located on tank sidewalls, within three feet of the tank base. The tank was fitted with a double bottom.

Final Inventory Management

At the beginning of closure activities, the tank contained a waste inventory. The waste inventory consisted of liquids (waste gasoline and water), sludge, and tank bottoms. Though the Plan allows for CHESI to process the inventory through its facility (Section 3.1 and 3.2), CHESI elected to remove and ship the inventory off-site to a licensed hazardous waste disposal facility. A summary of the waste disposal amounts is presented in Section 3.0.

CHESI began final inventory removal of Tank T-101 on November 8, 1999. Five thousand (5,000) gallons of waste gasoline was drawn off and transferred into a DOT-permitted tanker. Facility standard operating procedures were followed during the transfer operation and the waste was transported under proper manifesting by a permitted interstate hauler. The receiving facility was Giant Cement Corp., Harleysville, South Carolina (Manifest Number 99010).

On November 15, 1999, an additional load of the Tank T-101 final inventory, consisting of 5,000 gallons of petroleum liquid was removed via a vacuum truck. It was drawn off and transferred into a DOT-permitted tanker and manifested to Giant Cement Corp (Manifest Number 99014).

The remainder of the Tank T-101 final inventory consisted of water, sludge and sediment. The remaining liquid was drawn off into a tanker, totalling 2,426 gallons. This left sufficient capacity in the tanker to receive the sludge and sediment, as well as washwater, which would be removed during the cleaning process. Therefore, the tanker was staged on-site awaiting the cleaning wastes.

Tank Cleaning

On November 16, 1999, interior cleaning of Tank T-101 began. Initially, a one and a half hour training session for cleaning personnel was conducted by the project Health and Safety Officer, using the Health and Safety Plan as a guide. The training focused on the hazardous constituents of concern: benzene and lead. Subsequent to the first day, a health and safety briefing was conducted at the beginning of each workday.

The secondary containment area was used to set up a decontamination area for cleaning tools and personnel PPE.

Following the issuance of a hazardous work permit, the external appurtenances associated with the tank were removed. This included pumps, valves and piping on both the influent and effluent sides. Three manway access plates were removed; one on the top of the tank and other at the bottom sidewall. Force-air ventilation was applied to the tank interior. Prior to personnel entering the tank, a confined space entry permit was issued.

Once a briefing was conducted, personnel entered the tank and utilized squeegees and water to facilitate removal of sludge/sediments from the tank bottom and sidewalls via a vacuum truck. A total of 1,342 gallons of sludge/sediment/water was removed.

Following sludge removal, the bottom, sides and top of the tank interior were pressure washed. Scaffolding and harnessing were used to access the upper reaches of the tank interior. Pressure washing produced 332 gallons of washwater.

The sludge/sediment and washwater, totalling 1,674 gallons, were added to the staged tanker for transport off-site. The tanker load, totalling 4,100 gallons, was manifested (Manifest Number 99015) and shipped to the Clean Harbors of Baltimore, Inc.

On November 19, 1999, CHESI determined by inspection that the interior bottom layer of Tank T-101 experienced metal fatigue and had developed areas that could compromise the tank bottom with further use. The metal fatigue had affected the interior bottom, but had not affected the outer bottom. Though the tank was fitted with a double tank bottom, CHESI elected to render Tank T-101 unusable and disposed of it as hazardous waste, as allowed by the Closure Plan.

Following removal of the catwalk, a 50-ton crane was mobilized to the facility on November 22, 1999. The crane was used to lay the tank on its side, inside the secondary containment area. Upon exposure of the tank footprint, no evidence of leakage as a result of the interior metal fatigue was noted. Beginning on December 3, 1999, to render the tank unusable, the tank was torched into pieces, and the pieces loaded into a lined roll-off box. Along with the tank pieces, tank appurtenances, such as flame arrestor, level gauge, piping and piping insulation, as well as PPE, were loaded into the lined roll-off box. The disassembly was completed on December 7, 1999.

Given that the resulting solid waste volume generated by dismantling Tank T-101 was insufficient to fill the lined roll-off, the container was retained on-site to receive the anticipated soild waste resulting from the the decontamination of Oil/Water Separator (OWS) S-101. This was feasible given the decontamination of OWS S-101 would be completed well within the 90-day limit of retaining hazardous waste on-site prior to transportation off-site for disposal (See discussion below relative to the Oil/Water Separator S-101 for transportation information of this roll-off).

Attachment A presents copies of permits issued for this work. This includes hot work permits, confined-space entry permits and hazardous work permits. One confined space entry permit was issue for the one day of interior tank cleaning. Hot work permits were issued for each of the three days when tank torching took place and, four hazardous work permits were issued.

2.2 OIL/WATER SEPARATOR S-101

Decontamination procedures for the oil/water separator began on November 23, 1999, after Tank T-101 had been cleaned. Liquid, sludge, and sediment contained in the unit were removed via a vacuum truck. Facility standard operating procedures were followed during the transfer operation and the waste was transported under proper manifesting by a permitted interstate hauler.

The coalescing pack and housing were removed from the unit and placed in the same lined roll-off box as the dismantled pieces of Tank T-101. The appurtenances connected to the unit were also disconnected and loaded into the roll-off, leaving the flanged stubs that are integral to the unit structure. Once the solid waste was loaded into the roll-off, the container was properly sealed for transport to the disposal facility. Transportation off site occurred on January 28, 2000 to Clean Harbors Baltimore (Manifest Number 99018).

The inside of the unit was then pressure washed. The washwater was removed via vacuum truck. The cleaning process generated a total of 288 gallons of liquid, sludge and sediment. The truck transported the water to the Clean Harbors Baltimore (Manifest Number 99016). In addition, 150 gallons of washwater and residue from the cleaning process was removed to a tanker and shipped off-site to Clean Harbors Baltimore (Manifest Number 99017). Section 3.0 of this document summarizes the waste amounts.

Once the pressure washing was completed, a Dames & Moore registered professional engineer inspected the unit. The intent of the inspection was to apply the Alternative Treatment Standard, as allowed in the Closure Plan. Section 4.0 of this report presents the findings of that inspection.

3.0 SUMMARY OF WASTE DISPOSAL ACTIVITIES

CHESI elected to manage all wastes generated by the partial closure activities as hazardous waste. Except for the supernatant waste gasoline taken from the final inventory of Tank T-101, all liquid and sludge wastes are manifested as hazardous waste and shipped to the CHESI Baltimore facility. The waste gasoline was sent to Giant Cement Corp., Harleysville, South Carolina. Giant is a fuels blender, licensed and permitted to receive list and characteristic hazardous waste (waste gasoline).

The solid waste generated as part of the Tank T-101 dismantling was loaded into a lined roll-off container and shipped off-site as hazardous waste to the Clean Harbors Baltimore facility.

A summary of the wastes generated by the partial closure activities is presented below.

3.1 TANK T-101 WASTE GENERATION

WASTE DESCRIPTION	AMOUNT	RECEIVING FACILITY	MANIFEST NUMBER
Waste gasoline (final inventory)	5,000 gallons	Giant Cement Corp., SC	99010
Petroleum liquid (final inventory)	5,000 gallons	Giant Cement Corp., SC	99014
Water, sludge, and sediment (final inventory), and washwater	4,100 gallons	Clean Harbors of Baltimore, MD	99015 MD #0863210
Tank T-101 pieces and tank appurtenances. OWS S-101 Coalescing pack/housing, piping and appurtenances	15,000 pounds	Clean Harbors of Baltimore, MD	99018 MD #0863937

3.2 OIL WATER SEPARATOR S-101 WASTE GENERATION

WASTE DESCRIPTION	VOLUME	RECEIVING FACILITY	MANIFEST NUMBER
Waste liquid, sludge and sediment	288 gallons	Clean Harbors of Baltimore, MD	99016 MD #086933
Washwater and cleaning waste	150 gallons	Clean Harbors of Baltimore, MD	99017 MD #0863934

3.3 EXECUTED WASTE DISPOSAL MANIFESTS

Attachment B presents a copy of executed waste inventory manifest tracking forms for each of the waste streams, except Manifest Number 99018. Manifest 99018 was signed as received by the transporter. A copy of the fully executed manifest for this waste shipment will be included in the final Closure Report, once the secondary containment decontamination is complete.

4.0 PARTIAL CLOSURE CERTIFICATION

The Closure Plan requires that CHESI submit certifications from both the facility operator and an independent Virginia-licensed professional engineer verifying that the HWMUs have been closed in accordance with the approved Closure Plan (Section 1.1 of the Closure Plan). The Plan requires that the professional engineer will, at a minimum, conduct inspections or review paperwork as necessary to confirm that the items listed below have been completed in accordance with the Closure Plan.

1. Final waste inventory removal;
2. All waste shipped off-site has been delivered to appropriate off-site facilities selected by CHESI, and that manifest return copies have been received by CHESI;
3. All equipment scheduled for removal and disposal has been removed and delivered to a permitted disposal or reclamation facility;
4. All equipment that is not scheduled for removal has been cleaned and decontaminated in accordance with the Closure Plan;
5. Inspect secondary containment system to determine location of crack or gaps, and any other possible migratory pathways, if any;
6. Insure decontamination of HWMUs and secondary containment systems have been conducted in accordance with the Closure Plan;
7. Review all analytical data, laboratory reports, and QA/QC procedures.

Dames & Moore, under the direction of Mr. Robert J. Shaffer, P.E. (Virginia Registration No. 023609), provided closure oversight for CHESI. As part of this service, Dames & Moore conducted inspections of the units at various times during the closure activities. The log book entries by the site project supervisor were reviewed by Dames & Moore and telephone interviews were conducted.

This partial certification does not include the secondary containment system closure. Closure of the secondary containment system is ongoing and closure certification will be provided for that system when complete. This certification is for the two HWMUs identified in the Closure Plan. These are Tank T-101 and Oil/Water Separator S-101.

The following is a summary of this effort.

4.1 TANK T-101

In general, Dames & Moore certifies that the closure procedures, which were undertaken onsite for closure of Tank T-101, were in accordance with the closure plan and Virginia Hazardous Waste Management Regulations (VHWMR).

Final Waste Inventory Removal

Section 2.0 of this report presents a detailed summary of closure activities. The inventory residing in the tank at the time closure activities began was estimated to be 15,000 gallons (Section 2.1, Table I-1 of the Closure Plan). The actual inventory was 14,100 gallons. This inventory included waste gasoline, other petroleum liquids, and sludge/sediments (including 332 gallons of washwater), and was shipped off-site as hazardous waste.

By natural specific gravity separation, the waste gasoline that could be extracted from the top of the liquid column was transfer to a tanker and shipped off-site to a licensed, permitted reclamation facility. CHESI chose Giant Cement Corporation, Harleysville, South Carolina, US EPA ID Number SCD003351699. As confirmed by South Carolina Uniform Hazardous Waste Manifest Numbers 99010 and 99014, Giant received 10,000 gallons of waste gasoline from CHESI.

The remaining tank inventory, some sludge and sediment, was removed from the tank and shipped off-site to a licensed hazardous waste disposal facility. CHESI chose Clean Harbors of Baltimore, Inc., Baltimore, Maryland, US EPA ID Number MDD980555189. As confirmed by Maryland Uniform Hazardous Waste Manifest Number 99015, Clean Harbors of Baltimore received 4,100 gallons of petroleum waste liquids from CHESI.

The shipment off-site to Giant and Clean Harbors Baltimore totaled 14,100 gallons. Dames & Moore certifies that the entire final waste inventory in Tank T-101 was managed in accordance with the Closure Plan and was properly disposed of at off-site waste disposal facilities.

Waste Management

Once the final inventory was removed, cleaning solid wastes, tank pieces and appurtenances were loaded into a lined roll-off container and transported off-site for proper disposal. All waste generated by closure activities of Tank T-101 were disposed of as hazardous waste.

HWMU Decontamination

Cleaning activities for Tank T-101 met the requirements of Section 3.2 of the Closure Plan. The Health and Safety Plan was prepared as required by Section 2.2 of the Closure

Plan. A copy of the Health and Safety Plan is presented in Attachment C. Health and safety activities were followed and overseen by the CHESI Project Health and Safety Officer. The necessary permits (hot work, confined space and hazardous work) were prepared and issued in accordance with CHESI procedures and policies. Safety briefings were held prior to the beginning of each day of closure activities. The closure activity logbook includes the names of the personnel involved each day in the closure activities.

As discussed in Section 2.0 of this report, following sludge removal and pressure washing of the tank interior, it was found that the bottom of the tank was developing integrity problems. These problems had progressed to the point that CHESI elected to scrap the unit. Once that decision was made, closure decontamination or closure to the alternate treatment standards became unnecessary. As allowed by Section 3.2, paragraph 8 of the Closure Plan, the unit was rendered unusable and disposed of as hazardous waste. In addition to the tank, all piping and tank appurtenances were rendered unusable and disposed of along with the tank pieces as hazardous waste.

Activities to render the tank unusable took place inside the secondary containment area. They involved the torch cutting of the tank shell into pieces of appropriate size to fit inside a lined roll-off container. A crane was mobilized to the site to lay the tank on its side. This allowed access to the entire tank shell by CHESI personnel. Exposure of the crane or the operator to the hazardous constituents of concern did not occur, thereby preempting the need for decontamination. Tank piping and appurtenances were loaded in the same roll-off container.

Laboratory Data Review

CHESI elected to forego characterization of the tank pieces, components, waste liquids, and sludge, and shipped them off-site to a permitted, licensed disposal facility as hazardous waste.

Rinsate sampling and source water sampling were not necessary for closure activities. The unit was disposed of as hazardous waste in accordance with the Closure Plan. No statistical analyses or risk assessment was necessary. Therefore, the certification of this Partial Closure required no laboratory data review or QA/QC efforts.

4.2 OIL WATER SEPARATOR S-101

In general, Dames & Moore certifies that the closure procedures, which were undertaken onsite for closure of OWS S-101, were in accordance with the closure plan and Virginia Hazardous Waste Management Regulations (VHWMR).

CHESI elected to decontaminate the unit to the alternative treatment standards, as allowed by Section 3.1.1 of the Closure Plan.

Final Waste Inventory Removal

Section 2.0 of this report presents a detailed summary of closure activities. The inventory residing in the Oil/Water at the time closure activities began was estimated to be 487 gallons (Section 2.1, Table I-1 of the Closure Plan). The actual inventory was 438 gallons. This inventory included waste petroleum liquids, as well as 150 gallons of washwater, and was shipped off-site as hazardous waste.

The OWS inventory, some sludge and sediment, was removed from the unit and shipped off-site to a licensed hazardous waste disposal facility. CHESI chose Clean Harbors of Baltimore, Inc., Baltimore, Maryland, US EPA ID Number MDD980555189. As confirmed by Maryland Uniform Hazardous Waste Manifest Numbers 99016 and 99017, Clean Harbors of Baltimore received 438 gallons of petroleum waste liquids from CHESI.

Dames & Moore certifies that the entire waste inventory in OWS S-101 was managed in accordance with the Closure Plan and was properly disposed of at off-site waste disposal facilities.

Waste Management

Once the final inventory was removed, cleaning wastes and waste appurtenances were loaded into a lined roll-off container and transported off-site for proper disposal. All waste generated by closure activities of OWS S-101 were disposed of as hazardous waste.

HWMU Decontamination

Cleaning activities for OWS S-101 met the requirements of Section 3.2 of the Closure Plan. The Health and Safety Plan was prepared as required by Section 2.2 of the Closure Plan. A copy of the Health and Safety Plan is presented in Attachment C. Health and safety activities were followed and overseen by the Project Health and Safety Officer.

The OWS S-101 was closed in a manner that met the requirements of 9 VAC 20-60-800.B and the closure plan. In lieu of rinse water sampling, CHESI elected to close the unit under the Alternative Treatment Standards (ATS) option provided in the Plan. As defined in the Plan, ATS is a performance-based treatment standard of "clean debris surface" according to 40 CFR 268.5 Table 1 that pertains to metal debris. A "clean debris surface" means:

> *"the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discoloration, and soil and waste in*

> *cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks shall be limited to no more than 5% of each square inch of surface area*".

The unit was cleaned as required by Section 3.3 of the Closure Plan. All appurtenances and pipe connections were removed. The interior surfaces were scraped and squeegeed into a vacuum hose. Steam cleaning was then conducted on the entire interior surface. All wash water and residue was collected and disposed as described herein.

On December 10, 1999, a registered Virginia professional engineer from Dames & Moore examined the cleaned unit. The coalescing pack and housing had been removed and disposed. Therefore, the remaining unit was limited to the monolithic structure. Based on observation without magnification, no observable cracks, crevices or pits were noted on the interior surface. The original factory interior seal coating remained intact on approximately 80% of the interior surface. Minimal corrosion was observed on the interior surfaces where the coating had worn away. This was limited to the rim of the unit. At the time of the inspection, the cleaning process had removed any scale associated with the corrosion. The interiors of the flanged stub connections were observable. No residual waste or staining was observed.

Dames & Moore certifies this unit, as described herein, is closed to the performance-based treatment standard of "clean debris surface", as defined above and in 40 CFR 268.45 Table 1, as pertaining to metal surfaces.

Laboratory Data Review

The CHESI elected to forego characterization of the unit components, waste liquids and sludge, and shipped them off-site to a permitted, licensed disposal facility as hazardous waste.

Rinsate sampling and source water sampling were not necessary for closure activities. CHESI elected to close the unit to the performance-based alternative treatment standard as allowed for in the Closure Plan. This election precluded the need for laboratory analyses of water rinsate samples. Therefore, no statistical analyses or risk assessment was necessary and the certification of this Partial Closure required no laboratory data review or QA/QC efforts.

5.0 CLOSURE CERTIFICATION

Facility:

Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, Virginia

EPA ID Number VAD 988 175 055

Certification:

HWMUs Tank T-101 and Oil Water Separator S-101 have been closed in accordance with the approved Closure Plan, dated September 1999, as described in the Partial Closure Plan, dated January 2000.

Owner or Operator:

Signature: _____

Printed Name: Eric Gerstenberg

Title: Vice-President

Company: Clean Harbors Environmental Services, Inc.

Date: February 4, 2000

Independent Registered Professional Engineer:

Signature: _____

Printed Name: Robert J. Shaffer, P.E.

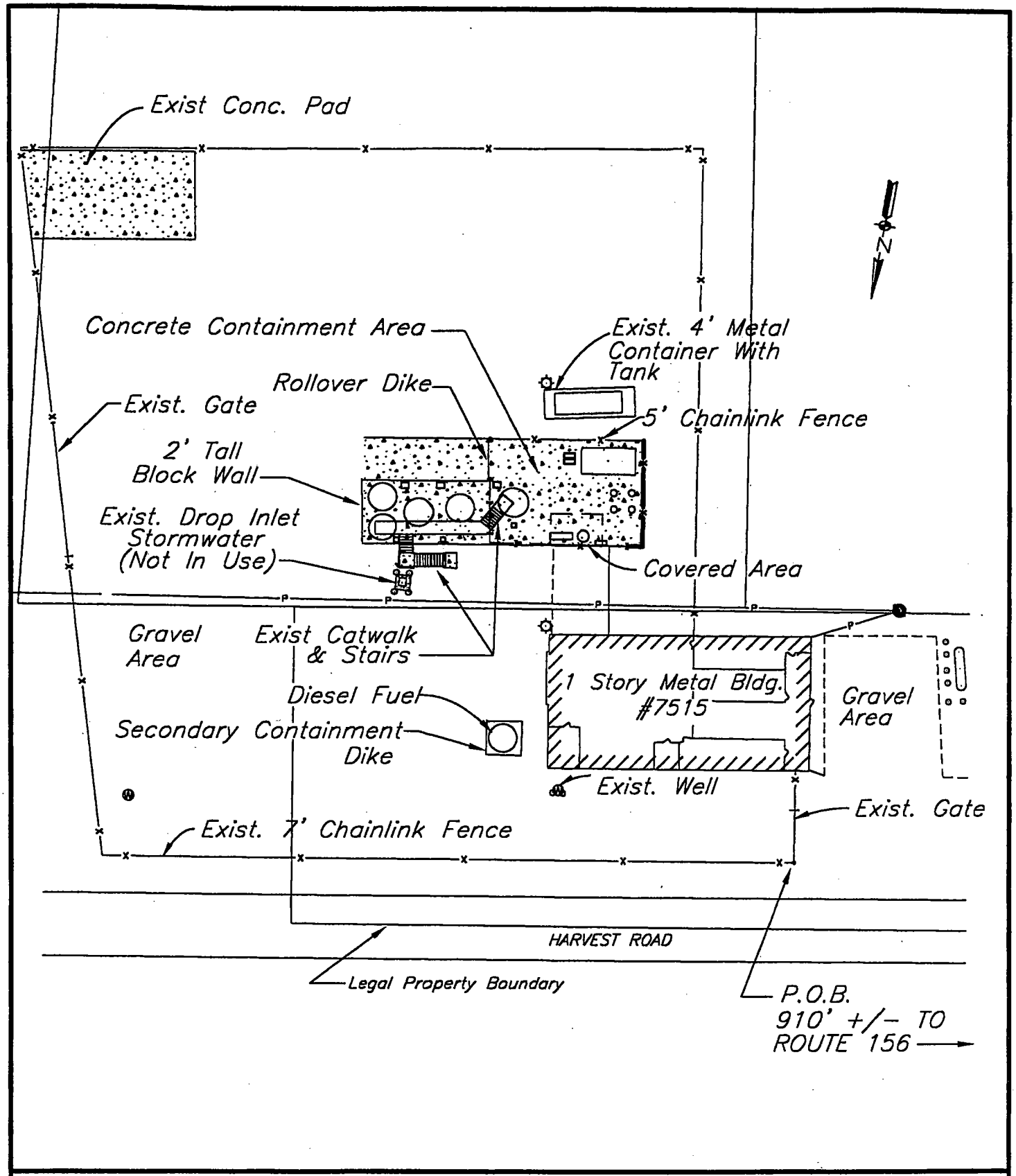
Registration Number: 0402 023609

Company: DAMES & MOORE

Date: Jan 28, 2000

FIGURE 1

FACILITY SITE PLAN



CLEAN HARBORS, INC.

PRINCE GEORGE, VIRGINIA

FACILITY SITE PLAN

FIGURE 1

0 20 40 80

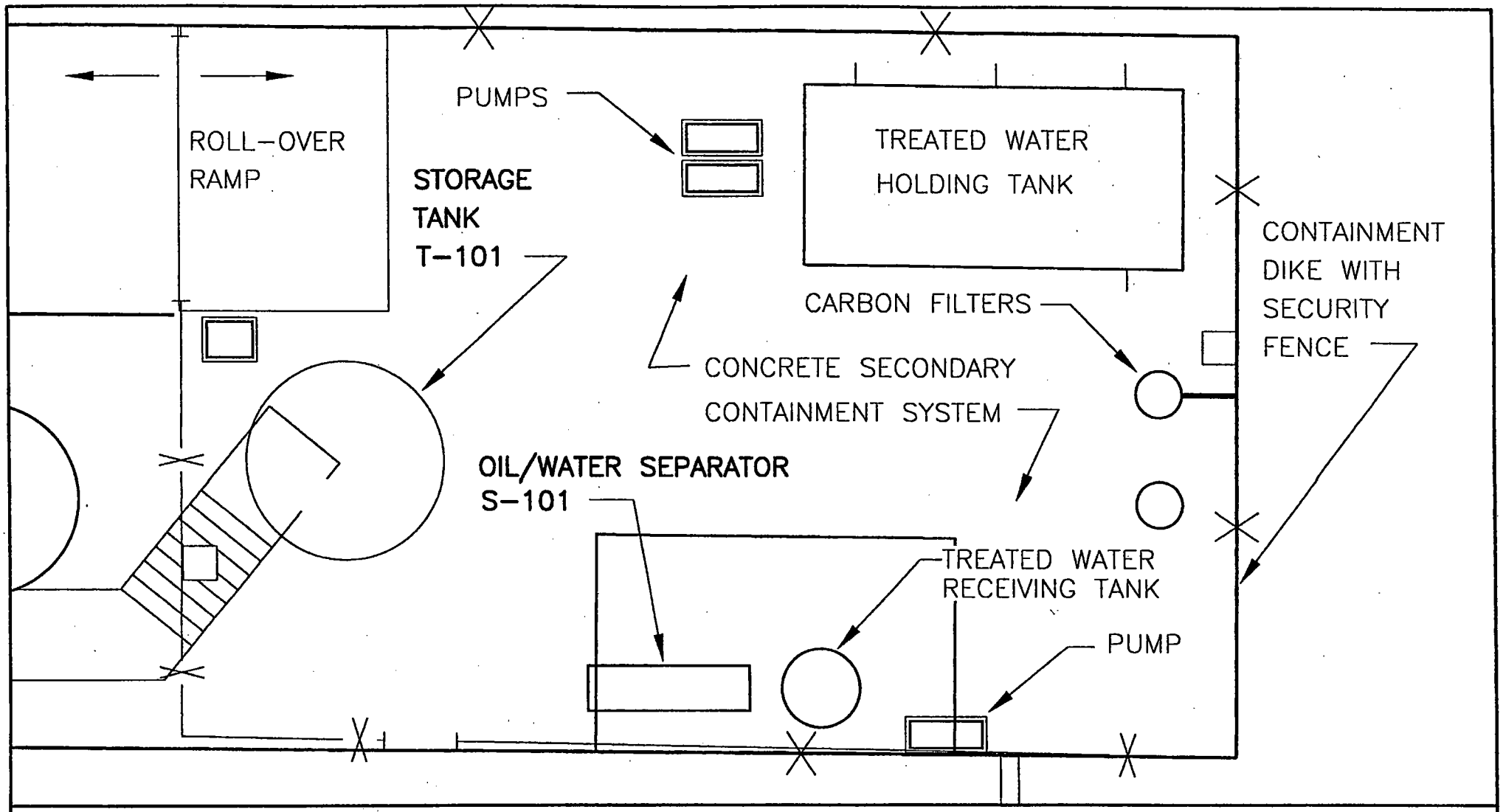
GRAPHIC SCALE

DAMES & MOORE

A DAMES & MOORE GROUP COMPANY

FIGURE 2

HAZARDOUS WASTE MANAGEMENT UNITS



CLEAN HARBORS, INC.
PRINCE GEORGE, VIRGINIA
HAZARDOUS WASTE MANAGEMENT UNITS
FIGURE 2

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

0 5 10 15
GRAPHIC SCALE

ATTACHMENT A

WORK PERMITS

HOT WORK PERMIT

BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED? IS THERE A SAFER WAY?

This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding.

PART 1

INSTRUCTIONS

1. Firesafety Supervisor:

A. Verify precautions listed at right (or do not proceed with the work).

B. Complete and retain PART 1

C. Issue PART 2 to person doing job.

HOT WORK BEING DONE BY:
☑ EMPLOYEE Brian J. Field
☐ CONTRACTOR _____

DATE 12-6-99 | JOB NO. VA 114 636

LOCATION/BUILDING & FLOOR Plant

NATURE OF JOB Cutting tank

NAME OF PERSON DOING HOT WORK Brian J. Field

I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED: (FIRESAFETY SUPERVISOR) [signature]

PERMIT EXPIRES:	DATE 12-6-99	TIME 8:00 AM 4:00 PM

NOTE EMERGENCY NOTIFICATION ON BACK OF FORM. USE AS APPROPRIATE FOR YOUR FACILITY.

Factory Mutual System

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REQUIRED PRECAUTIONS CHECKLIST

☑ Available sprinklers, hose streams and extinguishers are in service/operable.
☑ Hot Work equipment in good repair.

Requirements within 35 ft (11m) of work

☑ Flammable liquids, dust, lint and oily deposits removed.
☑ Explosive atmosphere in area eliminated.
☑ Floors swept clean.
☑ Combustible floors wet down, covered with damp sand or fire-resistive sheets.
☑ Remove other combustibles where possible. Otherwise protect with fire-resistive tarpaulins or metal shields.
☑ All wall and floor openings covered.
☐ Fire-resistive tarpaulins suspended beneath work.

Work on walls or ceilings

☑ Construction is noncombustible and without combustible covering or insulation.
☑ Combustibles on other side of walls moved away.

Work on enclosed equipment

☑ Enclosed equipment cleaned of all combustibles.
☑ Containers purged of flammable liquids/vapors.

Fire watch/Hot Work area monitoring

☑ Fire watch will be provided during and for 60 minutes after work, including any coffee or lunch breaks.
☑ Fire watch is supplied with suitable extinguishers, charged small hose.
☑ Fire watch is trained in use of this equipment and in sounding alarm.
☑ Fire watch may be required for adjoining areas, above, and below.
☑ Monitor Hot Work area for 4 hours after job is completed

Other Precautions Taken

☐ _____

00271305

WARNING!

HOT WORK IN PROGRESS
WATCH FOR FIRE!

IN CASE OF AN EMERGENCY:

CALL: 911

AT: Any plant Phones

WARNING!

Factory Mutual System

HOT WORK PERMIT

BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED? IS THERE A SAFER WAY?

This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding.

PART 1

02271306

INSTRUCTIONS

1. Firesafety Supervisor:

A. Verify precautions listed at right (or do not proceed with the work).

B. Complete and retain PART 1

C. Issue PART 2 to person doing job.

HOT WORK BEING DONE BY:
☑ EMPLOYEE Brian J. Field
☐ CONTRACTOR _____

DATE | JOB NO. VA114636

LOCATION/BUILDING & FLOOR
Plant

NATURE OF JOB
cut tank

NAME OF PERSON DOING HOT WORK
Brian J. Field

I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED: (FIRESAFETY SUPERVISOR)
[signature]

PERMIT EXPIRES:	DATE	TIME
	12-7-99	8:00 AM 8:00 PM

NOTE EMERGENCY NOTIFICATION ON BACK OF FORM. USE AS APPROPRIATE FOR YOUR FACILITY.

REQUIRED PRECAUTIONS CHECKLIST

☑ Available sprinklers, hose streams and extinguishers are in service/operable.
☐ Hot Work equipment in good repair.

Requirements within 35 ft (11m) of work

☑ Flammable liquids, dust, lint and oily deposits removed.
☑ Explosive atmosphere in area eliminated.
☑ Floors swept clean.
☑ Combustible floors wet down, covered with damp sand or fire-resistive sheets.
☐ Remove other combustibles where possible. Otherwise protect with fire-resistive tarpaulins or metal shields.
☑ All wall and floor openings covered.
☐ Fire-resistive tarpaulins suspended beneath work.

Work on walls or ceilings

☑ Construction is noncombustible and without combustible covering or insulation.
☑ Combustibles on other side of walls moved away.

Work on enclosed equipment

☑ Enclosed equipment cleaned of all combustibles.
☑ Containers purged of flammable liquids/vapors.

Fire watch/Hot Work area monitoring

☑ Fire watch will be provided during and for 60 minutes after work, including any coffee or lunch breaks.
☑ Fire watch is supplied with suitable extinguishers, charged small hose.
☑ Fire watch is trained in use of this equipment and in sounding alarm.
☑ Fire watch may be required for adjoining areas, above, and below.
☑ Monitor Hot Work area for 4 hours after job is completed

Other Precautions Taken

☐ _____

Factory Mutual System

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WARNING!

HOT WORK IN PROGRESS
WATCH FOR FIRE!

IN CASE OF AN EMERGENCY:

CALL: _____

AT: _____

_____

_____

WARNING!

Factory Mutual System

HOT WORK PERMIT

BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED? IS THERE A SAFER WAY?

This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding.

PART 1

02271304

INSTRUCTIONS

1. Firesafety Supervisor:

A. Verify precautions listed at right (or do not proceed with the work).

B. Complete and retain PART 1

C. Issue PART 2 to person doing job.

HOT WORK BEING DONE BY:
☑ EMPLOYEE Brian J. Field
☐ CONTRACTOR

DATE 12-3-4 | JOB NO. PA 114636

LOCATION/BUILDING & FLOOR OUTSIDE Haz Dike Area

NATURE OF JOB Torch Cutting

NAME OF PERSON DOING HOT WORK Brian J. Field

I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED: (FIRESAFETY SUPERVISOR) Gary K. Young

PERMIT EXPIRES:	DATE 12-3-99	TIME 8:00 AM ~~[illegible]~~ PM 4:00

NOTE EMERGENCY NOTIFICATION ON BACK OF FORM. USE AS APPROPRIATE FOR YOUR FACILITY.

Factory Mutual System

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REQUIRED PRECAUTIONS CHECKLIST

☑ Available sprinklers, hose streams and extinguishers are in service/operable.
☑ Hot Work equipment in good repair.

Requirements within 35 ft (11m) of work

☑ Flammable liquids, dust, lint and oily deposits removed.
☑ Explosive atmosphere in area eliminated.
☑ Floors swept clean.
☑ Combustible floors wet down, covered with damp sand or fire-resistive sheets.
☑ Remove other combustibles where possible. Otherwise protect with fire-resistive tarpaulins or metal shields.
☑ All wall and floor openings covered.
☐ Fire-resistive tarpaulins suspended beneath work.

Work on walls or ceilings

☐ Construction is noncombustible and without combustible covering or insulation.
☐ Combustibles on other side of walls moved away.

Work on enclosed equipment

☑ Enclosed equipment cleaned of all combustibles.
☑ Containers purged of flammable liquids/vapors.

Fire watch/Hot Work area monitoring

☑ Fire watch will be provided during and for 60 minutes after work, including any coffee or lunch breaks.
☑ Fire watch is supplied with suitable extinguishers, charged small hose.
☑ Fire watch is trained in use of this equipment and in sounding alarm.
☑ Fire watch may be required for adjoining areas, above, and below.
☑ Monitor Hot Work area for 4 hours after job is completed

Other Precautions Taken

☐ _____

WARNING!

HOT WORK IN PROGRESS
WATCH FOR FIRE!

IN CASE OF AN EMERGENCY:

CALL: 911

AT: ANY Phone at Facility

WARNING!

Factory Mutual System

CleanHarbors

HAZARDOUS WORK PERMIT

CLIENT: Clean Harbors Env. Service Inc
ADDRESS: 2575 Harvest RD Prince George VA
CLIENT CONTACT NAME: Gary Young -
CLIENT CONTACT PHONE #: 1800-3645939
DATE: Weds
DAY DATE

JOB LOCATION: Plant
DIG SAFE #: N/A
CHES JOB #: VA114636
CHES LOCATION: NFS/C
CHES PHONE #: 1800364 5939
H&S REP.: Shawon Multrie

DESCRIPTION OF WORK: Clean Seperator vac up In Dri's
cut 15000 g tank

EMERGENCY TELEPHONE NUMBERS
FIRE: 911 POLICE: 911 AMBULANCE/RESCUE: 911
HOSPITAL NAME & LOCATION: Columbia – Right 156 – Right 36 to 70 Left 2 miles on Right

HAZARDS
- ☐ TOXIC:
- ☐ CORROSIVE:
- ☑ FLAMMABLE:
- ☐ COMBUSTIBLE:
- ☐ REACTIVE:
- ☐ PATH WASTE
- ☐ ASBESTOS
- ☐ EXTREME COLD/HEAT
- ☐ DRAINS/SUMPS
- ☐ SHARP OBJECTS
- ☐ DRILLING IN SOIL
- ☐ LIGHTING
- ☑ SLIPS/TRIPS/ FALLS
- ☐ ABRASIVE BLASTING
- ☐ SOIL EXCAVATION
- ☐ TANK EXCAVATION
- ☐ UNDERGROUND/ OVERHEAD UTILITIES
- ☐ TRENCHING
- ☐ FLOOR HOLES
- ☐ WORKING ON OR NEAR WATER
- ☐ VEHICLE TRAFFIC
- ☑ HOT WORK
- ☐ VACTOR/CUSCO
- ☑ LADDERS
- ☑ NOISE
- ☑ LIFTING
- ☐ HOTSY/WATERBLASTER
- ☐ ELEVATED WORK AREA
- ☐ LIVE ELECTRICAL CIRCUITS
- ☐ PNEUMATIC TOOLS
- ☑ DRUM HANDLING
- ☑ Pressure Washer

PERSONAL SAFETY
- ☐ SUPPLIED AIR RESPIRATOR
- ☐ SAR WITH EGRESS BOTTLE
- ☐ SCBA
- ☐ AIR PURIFYING RESPIRATOR CARTRIDGE:
- ☐ BARRIER CREAM
- ☑ WORK AREA DESIGNATED
- ☑ PROTECTIVE COVERALLS TYPE: CPI
- ☐ FULLY ENCAPSULATING SUIT
- ☐ FLASH SUIT
- ☑ HEARING PROTECTION
- ☐ NOMEX COVERALLS
- ☐ OVERBOOTS
- ☑ OUTER GLOVES TYPE: PVC
- ☐ INNER GLOVES TYPE:
- ☐ REFLECTIVE VESTS
- ☐ PROPERLY SLOPED EXCAVATION/TRENCH
- ☑ SAFETY GLASSES
- ☐ CHEMICAL GOGGLES
- ☐ FACE SHIELD
- ☑ LIFEBELT LANYARD
- ☐ COMMUNICATIONS
- ☐ PFD'S
- ☑ HARDHATS
- ☑ EYE WASH
- ☑ SAFETY SHOWER
- ☑ FIRST-AID KIT
- ☐ VENTILATION
- ☐ EVACUATION PLAN

FIRE SAFETY
- ☑ ALARM BOX IN AREA LOCATION: Dike wall
- ☑ WATER HOSE RUNNING
- ☑ FIRE EXTINGUISHERS TYPE: DRY Chem (3)
- ☐ FIRE HOSE LAID OUT
- ☐ EQUIP. GROUNDED & BONDED
- ☐ NON-SPARKING TOOLS
- ☐ ELIMINATE IGNITION SOURCES
- ☐ EXPLOSION PROOF EQUIPMENT
- ☑ HOT WORK PERMIT
- ☑ FIRE BLANKET
- ☑ SMOKING AREA DESIGNATED LOCATION: Outside Front Door
- ☑ AREA KEPT WET

ISOLATE EQUIPMENT
- ☐ ESTABLISH EXCLUSION ZONE
- ☐ STOP TRANSFERS
- ☐ DISCONNECT & BLANK
- ☑ POST WORK SIGNS
- ☑ CAUTION TAPE AREA
- ☐ LOCKOUT/TAGOUT

ELECTRICAL SAFETY
- ☐ LOCKOUT/TAGOUT
- ☐ EQUIPMENT GROUNDED
- ☐ GFCIS
- ☐ NON-CONDUCTIVE TOOLS

CHES PERSONNEL *PRINT NAME AND SIGNATURE*

Tim Easter	Tim Easter		
Gene Flora	Gene Flora		
Chris Jeffers	Chris Jeffers		

AIR MONITORING TYPE OF METER DATE LAST CALIBRATED
AIR MONITORING LOG REVERSE SIDE

SUBSTANCE	LEVEL B MAX.	ACTION LEVELS LEVEL C MAX.	LEVEL D. MAX.

FOREMAN'S COMMENTS/MINUTES OF SAFETY MEETING: Be aware of cutting In Dike Area - wear Dark Safety cutting Goggles – Do not wash Your self or Others with pressure washer Keep Fire Ext. And water Hose Next to tank always Have 1 person Fire watch when cutting.

HEALTH & SAFETY COMMENTS:

FOREMAN'S SIGNATURE: S T Bell DATE: 11-24-99
HEALTH & SAFETY SIGNATURE: DATE:

CHI 121 (9/97)

(OVER)

CleanHarbors

HAZARDOUS WORK PERMIT

CLIENT: Clean Harbors Env. Service
ADDRESS: 7515 Prince George VA
CLIENT CONTACT NAME: Gary Young
CLIENT CONTACT PHONE #: 18003645939
DATE: Tues 11-22-99
DAY DATE

JOB LOCATION: Plant
DIG SAFE #: N/A
CHES JOB #: VA114636
CHES LOCATION: NFS/L
CHES PHONE #: 18003645939
H&S REP.: Shawn Maltrie

DESCRIPTION OF WORK: VAC out Seperator + Pressure Wash tank
Cut up tank

EMERGENCY TELEPHONE NUMBERS
FIRE: 911 POLICE: 911 AMBULANCE/RESCUE: 911
HOSPITAL NAME & LOCATION: Columbia Hosp - 156 Make Rt - 36 Right - 10 Make Left

HAZARDS
- ☐ TOXIC:
- ☐ CORROSIVE:
- ☑ FLAMMABLE:
- ☐ COMBUSTIBLE:
- ☐ REACTIVE:
- ☐ PATH WASTE
- ☐ ASBESTOS
- ☑ EXTREME COLD/HEAT
- ☐ DRAINS/SUMPS
- ☐ SHARP OBJECTS
- ☐ DRILLING IN SOIL
- ☐ LIGHTING
- ☑ SLIPS/TRIPS/ FALLS
- ☐ ABRASIVE BLASTING
- ☐ SOIL EXCAVATION
- ☐ TANK EXCAVATION
- ☐ UNDERGROUND/ OVERHEAD UTILITIES
- ☐ TRENCHING
- ☐ FLOOR HOLES
- ☐ WORKING ON OR NEAR WATER
- ☐ VEHICLE TRAFFIC
- ☑ HOT WORK
- ☐ VACTOR/CUSCO
- ☐ LADDERS
- ☑ NOISE
- ☑ LIFTING
- ☐ HOTSY/WATERBLASTER
- ☐ ELEVATED WORK AREA
- ☐ LIVE ELECTRICAL CIRCUITS
- ☐ PNEUMATIC TOOLS
- ☑ DRUM HANDLING
- ☑ Pressure Washer

PERSONAL SAFETY
- ☐ SUPPLIED AIR RESPIRATOR
- ☐ SAR WITH EGRESS BOTTLE
- ☐ SCBA
- ☐ AIR PURIFYING RESPIRATOR CARTRIDGE:
- ☐ BARRIER CREAM
- ☑ WORK AREA DESIGNATED
- ☑ PROTECTIVE COVERALLS TYPE: CPFI
- ☐ FULLY ENCAPSULATING SUIT
- ☐ FLASH SUIT
- ☑ HEARING PROTECTION
- ☐ NOMEX COVERALLS
- ☑ OVERBOOTS
- ☑ OUTER GLOVES TYPE: PVC
- ☐ INNER GLOVES TYPE:
- ☐ REFLECTIVE VESTS
- ☐ PROPERLY SLOPED EXCAVATION/TRENCH
- ☑ SAFETY GLASSES
- ☐ CHEMICAL GOGGLES
- ☐ FACE SHIELD
- ☐ LIFEBELT/LANYARD
- ☐ COMMUNICATIONS
- ☐ PFD'S
- ☐ HARDHATS
- ☑ EYE WASH
- ☑ SAFETY SHOWER
- ☑ FIRST-AID KIT
- ☐ VENTILATION
- ☐ EVACUATION PLAN

FIRE SAFETY
- ☑ ALARM BOX IN AREA LOCATION: Air Horn
- ☐ WATER HOSE RUNNING
- ☑ FIRE EXTINGUISHERS TYPE: Dry chem
- ☐ FIRE HOSE LAID OUT
- ☑ EQUIP. GROUNDED & BONDED
- ☐ NON-SPARKING TOOLS
- ☐ ELIMINATE IGNITION SOURCES
- ☐ EXPLOSION PROOF EQUIPMENT
- ☑ HOT WORK PERMIT
- ☐ FIRE BLANKET
- ☑ SMOKING AREA DESIGNATED LOCATION: Outside Front Door
- ☑ AREA KEPT WET

ISOLATE EQUIPMENT
- ☐ ESTABLISH EXCLUSION ZONE
- ☐ STOP TRANSFERS
- ☐ DISCONNECT & BLANK
- ☑ POST WORK SIGNS
- ☑ CAUTION TAPE AREA
- ☐ LOCKOUT/TAGOUT

ELECTRICAL SAFETY
- ☐ LOCKOUT/TAGOUT
- ☑ EQUIPMENT GROUNDED
- ☑ GFCIS
- ☐ NON-CONDUCTIVE TOOLS

CHES PERSONNEL *PRINT NAME AND SIGNATURE*

Gene Flora	[signature]		
Sylvia Haded	[signature]		
TIM EASTER	[signature]		

AIR MONITORING TYPE OF METER _____ DATE LAST CALIBRATED _____
AIR MONITORING LOG REVERSE SIDE

SUBSTANCE	ACTION LEVELS LEVEL B MAX.	LEVEL C MAX.	LEVEL D. MAX.

FOREMAN'S COMMENTS/MINUTES OF SAFETY MEETING: Wear gogles when Burning - when Cleaning Seperator. ground Drum loader IF leaning into tank where Respirator - Decon Inside of Dike Area - put All Equipment Back After Use - Be aware of Surrounding Area work In progress.

HEALTH & SAFETY COMMENTS:

FOREMAN'S SIGNATURE: [signature] DATE: 11-23-99
HEALTH & SAFETY SIGNATURE: DATE:

CHI 121 (9/97) (OVER)

CleanHarbors

HAZARDOUS WORK PERMIT

CLIENT: Clean Harbors Env. Service Inc.
ADDRESS: 7575 Harvest Rd Prince George VA
CLIENT CONTACT NAME: Gary Young
CLIENT CONTACT PHONE #: 1800-364-5939
DATE: Mon 11-22-99 (DAY DATE)

JOB LOCATION: Plant
DIG SAFE #: N/A
CHES JOB #: VA 114636
CHES LOCATION: NFS/C - RVS/C
CHES PHONE #: 1800-364-5939
H&S REP.: Shawn Maltrie

DESCRIPTION OF WORK: Remove product From Seperator -

EMERGENCY TELEPHONE NUMBERS
FIRE: 911 POLICE: 911 AMBULANCE/RESCUE: 911
HOSPITAL NAME & LOCATION: Columbia Hosp - 156 to 36 - Right - Route 10 - Left - on Rt side 1 mile

HAZARDS
- ☐ TOXIC:
- ☐ CORROSIVE:
- ☐ FLAMMABLE:
- ☑ COMBUSTIBLE: Oil
- ☐ REACTIVE:
- ☐ PATH WASTE
- ☐ ASBESTOS
- ☐ EXTREME COLD/HEAT
- ☐ DRAINS/SUMPS
- ☑ SHARP OBJECTS
- ☐ DRILLING IN SOIL
- ☐ LIGHTING
- ☑ SLIPS/TRIPS/ FALLS
- ☐ ABRASIVE BLASTING
- ☐ SOIL EXCAVATION
- ☐ TANK EXCAVATION
- ☐ UNDERGROUND/ OVERHEAD UTILITIES
- ☐ TRENCHING
- ☐ FLOOR HOLES
- ☐ WORKING ON OR NEAR WATER
- ☐ VEHICLE TRAFFIC
- ☐ HOT WORK
- ☐ VACTOR/CUSCO
- ☐ LADDERS
- ☑ NOISE
- ☑ LIFTING
- ☐ HOTSY/WATERBLASTER
- ☑ ELEVATED WORK AREA
- ☐ LIVE ELECTRICAL CIRCUITS
- ☐ PNEUMATIC TOOLS
- ☑ DRUM HANDLING
- ☑ Pressure Washer

PERSONAL SAFETY
- ☐ SUPPLIED AIR RESPIRATOR
- ☐ SAR WITH EGRESS BOTTLE
- ☐ SCBA
- ☑ AIR PURIFYING RESPIRATOR CARTRIDGE: Chemical
- ☐ BARRIER CREAM
- ☑ WORK AREA DESIGNATED
- ☑ PROTECTIVE COVERALLS TYPE: CPFI's
- ☐ FULLY ENCAPSULATING SUIT
- ☐ FLASH SUIT
- ☑ HEARING PROTECTION
- ☐ NOMEX COVERALLS
- ☑ OVERBOOTS
- ☑ OUTER GLOVES TYPE: PVC
- ☑ INNER GLOVES TYPE: Latex
- ☐ REFLECTIVE VESTS
- ☑ SAFETY GLASSES
- ☐ CHEMICAL GOGGLES
- ☐ FACE SHIELD
- ☐ LIFEBELT/LANYARD
- ☐ COMMUNICATIONS
- ☐ PFD'S
- ☑ HARDHATS
- ☑ EYE WASH
- ☑ SAFETY SHOWER
- ☑ FIRST-AID KIT
- ☐ VENTILATION
- ☐ EVACUATION PLAN
- ☐ PROPERLY SLOPED EXCAVATION/TRENCH

FIRE SAFETY
- ☑ ALARM BOX IN AREA LOCATION: Airlock
- ☑ WATER HOSE RUNNING
- ☑ FIRE EXTINGUISHERS TYPE: Dry Chem's
- ☐ FIRE HOSE LAID OUT
- ☐ EQUIP. GROUNDED & BONDED
- ☐ NON-SPARKING TOOLS
- ☐ ELIMINATE IGNITION SOURCES
- ☐ EXPLOSION PROOF EQUIPMENT
- ☐ HOT WORK PERMIT
- ☐ FIRE BLANKET
- ☑ SMOKING AREA DESIGNATED LOCATION: Outside Front office
- ☐ AREA KEPT WET

ISOLATE EQUIPMENT
- ☐ ESTABLISH EXCLUSION ZONE
- ☐ STOP TRANSFERS
- ☐ DISCONNECT & BLANK
- ☑ POST WORK SIGNS
- ☑ CAUTION TAPE AREA
- ☑ LOCKOUT/TAGOUT

ELECTRICAL SAFETY
- ☑ LOCKOUT/TAGOUT
- ☐ EQUIPMENT GROUNDED
- ☐ GFCIS
- ☐ NON-CONDUCTIVE TOOLS

CHES PERSONNEL *PRINT NAME AND SIGNATURE*
Timothy Easter — Timothy Easter
Chris Jeffer — Chris Jeffer

AIR MONITORING TYPE OF METER _____ DATE LAST CALIBRATED _____
AIR MONITORING LOG REVERSE SIDE

SUBSTANCE	LEVEL B MAX.	ACTION LEVELS LEVEL C MAX.	LEVEL D. MAX.

FOREMAN'S COMMENTS/MINUTES OF SAFETY MEETING: If leaving In top Use Respirator - If going In top to Shovel out Use Respirator - Gloves Amust - Use Harness If more than 4' off Ground

HEALTH & SAFETY COMMENTS:

FOREMAN'S SIGNATURE: [signature] DATE: 11-22-99
HEALTH & SAFETY SIGNATURE: DATE:

CHI 121 (9/97) (OVER)

CleanHarbors

HAZARDOUS WORK PERMIT

CLIENT: Clean Harbors Env. Service
ADDRESS: 7515 Prince George VA
CLIENT CONTACT NAME: Gary Young
CLIENT CONTACT PHONE #: 18003645939
DATE: Tues (DAY) 11-22-99 (DATE)

JOB LOCATION: Plant
DIG SAFE #: N/A
CHES JOB #: VA114636
CHES LOCATION: NFS/L
CHES PHONE #: 18003645939
H&S REP.: Shawn Maltrie

DESCRIPTION OF WORK: VAC out Seperator + Pressure Wash tank
Cut up tank

EMERGENCY TELEPHONE NUMBERS
FIRE: 911 POLICE: 911 AMBULANCE/RESCUE: 911
HOSPITAL NAME & LOCATION: Columbia Hosp - 156 Make Rt - 36 Right - 10 Make Left

HAZARDS
- ☐ TOXIC:
- ☐ CORROSIVE:
- ☑ FLAMMABLE:
- ☐ COMBUSTIBLE:
- ☐ REACTIVE:
- ☐ PATH WASTE
- ☐ ASBESTOS
- ☑ EXTREME COLD/HEAT
- ☐ DRAINS/SUMPS
- ☐ SHARP OBJECTS
- ☐ DRILLING IN SOIL
- ☐ LIGHTING
- ☑ SLIPS/TRIPS/ FALLS
- ☐ ABRASIVE BLASTING
- ☐ SOIL EXCAVATION
- ☐ TANK EXCAVATION
- ☐ UNDERGROUND/ OVERHEAD UTILITIES
- ☐ TRENCHING
- ☐ FLOOR HOLES
- ☐ WORKING ON OR NEAR WATER
- ☐ VEHICLE TRAFFIC
- ☑ HOT WORK
- ☐ VACTOR/CUSCO
- ☐ LADDERS
- ☑ NOISE
- ☑ LIFTING
- ☐ HOTSY/WATERBLASTER
- ☐ ELEVATED WORK AREA
- ☐ LIVE ELECTRICAL CIRCUITS
- ☐ PNEUMATIC TOOLS
- ☑ DRUM HANDLING
- ☑ Pressure Washer

PERSONAL SAFETY
- ☐ SUPPLIED AIR RESPIRATOR
- ☐ SAR WITH EGRESS BOTTLE
- ☐ SCBA
- ☐ AIR PURIFYING RESPIRATOR CARTRIDGE:
- ☐ BARRIER CREAM
- ☑ WORK AREA DESIGNATED
- ☑ PROTECTIVE COVERALLS TYPE: CPFI
- ☐ FULLY ENCAPSULATING SUIT
- ☐ FLASH SUIT
- ☑ HEARING PROTECTION
- ☐ NOMEX COVERALLS
- ☑ OVERBOOTS
- ☑ OUTER GLOVES TYPE: PVC
- ☐ INNER GLOVES TYPE:
- ☐ REFLECTIVE VESTS
- ☐ PROPERLY SLOPED EXCAVATION/TRENCH
- ☑ SAFETY GLASSES
- ☐ CHEMICAL GOGGLES
- ☐ FACE SHIELD
- ☐ LIFEBELT/LANYARD
- ☐ COMMUNICATIONS
- ☐ PFD'S
- ☐ HARDHATS
- ☑ EYE WASH
- ☑ SAFETY SHOWER
- ☑ FIRST-AID KIT
- ☐ VENTILATION
- ☐ EVACUATION PLAN

FIRE SAFETY
- ☑ ALARM BOX IN AREA *LOCATION:* Air Horn
- ☐ WATER HOSE RUNNING
- ☑ FIRE EXTINGUISHERS TYPE: Dry Chem
- ☐ FIRE HOSE LAID OUT
- ☑ EQUIP. GROUNDED & BONDED
- ☐ NON-SPARKING TOOLS
- ☐ ELIMINATE IGNITION SOURCES
- ☐ EXPLOSION PROOF EQUIPMENT
- ☑ HOT WORK PERMIT
- ☐ FIRE BLANKET
- ☑ SMOKING AREA DESIGNATED *LOCATION:* Outside Front Door
- ☑ AREA KEPT WET

ISOLATE EQUIPMENT
- ☐ ESTABLISH EXCLUSION ZONE
- ☐ STOP TRANSFERS
- ☐ DISCONNECT & BLANK
- ☑ POST WORK SIGNS
- ☑ CAUTION TAPE AREA
- ☐ LOCKOUT/TAGOUT

ELECTRICAL SAFETY
- ☐ LOCKOUT/TAGOUT
- ☑ EQUIPMENT GROUNDED
- ☑ GFCIS
- ☐ NON-CONDUCTIVE TOOLS

CHES PERSONNEL *PRINT NAME AND SIGNATURE*

Gene Flora	[signature]		
Sylvia Haded	[signature]		
TIM EASTER	[signature]		

AIR MONITORING **TYPE OF METER** _____ **DATE LAST CALIBRATED** _____
AIR MONITORING LOG REVERSE SIDE

SUBSTANCE	ACTION LEVELS LEVEL B MAX.	LEVEL C MAX.	LEVEL D. MAX.

FOREMAN'S COMMENTS/MINUTES OF SAFETY MEETING: Wear gogles when Burning - when Cleaning Seperator - ground Drum loader IF leaning into tank where Respirator - Decon Inside of Dike Area - put All Equipment Back After Use - Be aware of Surrounding Area work in progress.

HEALTH & SAFETY COMMENTS:

FOREMAN'S SIGNATURE: [signature] **DATE:** 11-23-99
HEALTH & SAFETY SIGNATURE: **DATE:**

CHI 121 (9/97) (OVER)

CleanHarbors

HAZARDOUS WORK PERMIT

CLIENT: Clean Harbors Env. Service Inc.
ADDRESS: 7575 Harvest Rd Prince George VA
CLIENT CONTACT NAME: Gary Young
CLIENT CONTACT PHONE #: 1800-364-5939
DATE: Mon 11-22-99 (DAY / DATE)

JOB LOCATION: Plant
DIG SAFE #: N/A
CHES JOB #: VA 114636
CHES LOCATION: NFS/C – RVS/C
CHES PHONE #: 1800-364-5939
H&S REP.: Shawn Maltrie

DESCRIPTION OF WORK: Remove product From Seperator -

EMERGENCY TELEPHONE NUMBERS
FIRE: 911 POLICE: 911 AMBULANCE/RESCUE: 911
HOSPITAL NAME & LOCATION: Columbia Hosp - 156 to 36 - Right - Route 10 - Left - on Rt side 1 mile

HAZARDS
- ☐ TOXIC:
- ☐ CORROSIVE:
- ☐ FLAMMABLE:
- ☑ COMBUSTIBLE: Oil
- ☐ REACTIVE:
- ☐ PATH WASTE
- ☐ ASBESTOS
- ☐ EXTREME COLD/HEAT
- ☐ DRAINS/SUMPS
- ☑ SHARP OBJECTS
- ☐ DRILLING IN SOIL
- ☐ LIGHTING
- ☑ SLIPS/TRIPS/ FALLS
- ☐ ABRASIVE BLASTING
- ☐ SOIL EXCAVATION
- ☐ TANK EXCAVATION
- ☐ UNDERGROUND/ OVERHEAD UTILITIES
- ☐ TRENCHING
- ☐ FLOOR HOLES
- ☐ WORKING ON OR NEAR WATER
- ☐ VEHICLE TRAFFIC
- ☐ HOT WORK
- ☐ VACTOR/CUSCO
- ☐ LADDERS
- ☑ NOISE
- ☑ LIFTING
- ☐ HOTSY/WATERBLASTER
- ☑ ELEVATED WORK AREA
- ☐ LIVE ELECTRICAL CIRCUITS
- ☐ PNEUMATIC TOOLS
- ☑ DRUM HANDLING
- ☑ Pressure Washer

PERSONAL SAFETY
- ☐ SUPPLIED AIR RESPIRATOR
- ☐ SAR WITH EGRESS BOTTLE
- ☐ SCBA
- ☑ AIR PURIFYING RESPIRATOR CARTRIDGE: Chemical
- ☐ BARRIER CREAM
- ☑ WORK AREA DESIGNATED
- ☑ PROTECTIVE COVERALLS TYPE: CPFI's
- ☐ FULLY ENCAPSULATING SUIT
- ☐ FLASH SUIT
- ☑ HEARING PROTECTION
- ☐ NOMEX COVERALLS
- ☑ OVERBOOTS
- ☑ OUTER GLOVES TYPE: PVC
- ☑ INNER GLOVES TYPE: Latex
- ☐ REFLECTIVE VESTS
- ☐ PROPERLY SLOPED EXCAVATION/TRENCH
- ☑ SAFETY GLASSES
- ☐ CHEMICAL GOGGLES
- ☐ FACE SHIELD
- ☐ LIFEBELT/LANYARD
- ☐ COMMUNICATIONS
- ☐ PFD'S
- ☑ HARDHATS
- ☑ EYE WASH
- ☑ SAFETY SHOWER
- ☑ FIRST-AID KIT
- ☐ VENTILATION
- ☐ EVACUATION PLAN

FIRE SAFETY
- ☑ ALARM BOX IN AREA LOCATION: Airlock
- ☑ WATER HOSE RUNNING
- ☑ FIRE EXTINGUISHERS TYPE: Dry Chem's
- ☐ FIRE HOSE LAID OUT
- ☐ EQUIP. GROUNDED & BONDED
- ☐ NON-SPARKING TOOLS
- ☐ ELIMINATE IGNITION SOURCES
- ☐ EXPLOSION PROOF EQUIPMENT
- ☐ HOT WORK PERMIT
- ☐ FIRE BLANKET
- ☑ SMOKING AREA DESIGNATED LOCATION: Outside Front office
- ☐ AREA KEPT WET

ISOLATE EQUIPMENT
- ☐ ESTABLISH EXCLUSION ZONE
- ☐ STOP TRANSFERS
- ☐ DISCONNECT & BLANK
- ☑ POST WORK SIGNS
- ☑ CAUTION TAPE AREA
- ☑ LOCKOUT/TAGOUT

ELECTRICAL SAFETY
- ☑ LOCKOUT/TAGOUT
- ☐ EQUIPMENT GROUNDED
- ☐ GFCIS
- ☐ NON-CONDUCTIVE TOOLS

CHES PERSONNEL *PRINT NAME AND SIGNATURE*
Timothy Easter — Timothy Easter
Chris Jeffer — Chris Jeffer

AIR MONITORING TYPE OF METER _____ DATE LAST CALIBRATED _____
AIR MONITORING LOG REVERSE SIDE

SUBSTANCE	LEVEL B MAX.	ACTION LEVELS LEVEL C MAX.	LEVEL D. MAX.

FOREMAN'S COMMENTS/MINUTES OF SAFETY MEETING: If leaving In top Use Respirator - If going In top to Shovel out Use Respirator - Gloves A must - Use Harness If more than 4' off Ground

HEALTH & SAFETY COMMENTS:

FOREMAN'S SIGNATURE: [signature] DATE: 11-22-99
HEALTH & SAFETY SIGNATURE: DATE:

CHI 121 (9/97) (OVER)

CONFINED SPACE ENTRY PERMIT

CLIENT: Clean Harbors CHES LOCATION: [redacted] KYC JOB NUMBER: VA-114636
CLIENT ADDRESS: 7515 Harvest RD Prince George VA
PURPOSE OF ENTRY:
PERMIT IS VALID FROM: 1100 AM/PM 11-22-99 TO: 100 AM/PM 11/22/99

SECTION I DESCRIPTION OF SPACE

CLIENT PROVIDED INFORMATION:

SPACE IDENTIFICATION (NUMBER/NAME) PERMIT REQUIRED? ☑ YES ☐ NO PRECAUTIONS BY CLIENT? ☑ YES ☐ NO
CLIENT/CONTRACTOR WORK IN PROGRESS ☐ YES ☑ NO (IF YES, CAN WORK BE RE-SCHEDULED? ☐ YES ☐ NO (if no contact H&S)
SPACE DIMENSIONS: LENGTH 6' WIDTH 6' HEIGHT 26' CAPACITY 15000 - GAL.
OPENING/ENTRYWAY: HOW MANY? 2 SIZE 36" LOCATION Sides ☐ VERTICAL ☑ HORIZONTAL ☐ GREATER THAN 5 FEET
KNOWN HAZARDS: Cleaned Twice - No Product - Removal of Scaffolding.

SECTION II HAZARD ASSESSMENT - POTENTIAL HAZARDS THAT MAY BE ENCOUNTERED

ATMOSPHERIC HAZARDS:

☑ OXYGEN DEFICIENCY<19.5% ☐ OXYGEN ENRICHED >22.0% ☐ FLAMMABLE ABOVE 10% LEL ☐ TOXICS ABOVE 1/2 PEL ☐ TOXICS ABOVE 1/2 IDLH

PHYSICAL HAZARDS:

☐ ACTIVITIES NEAR AREA	☐ FLOOR HOLES	☐ HOT WORK	☐ PATHWASTE SHARPS	☑ STORED ENERGY
☐ BAFFLES	☐ ELEVATED WORK	☐ IONIZING RADIATION	☐ POWER TOOLS	☐ ELECTRICAL
☐ BURNS	☐ ELECTRICAL SHOCK	☐ LADDERS	☐ PRODUCT LINES	☐ HYDRAULIC
☐ COLD STRESS	☐ ENGULFMENT	☑ LIMITED LIGHTING	☑ SLIP/TRIP/FALLS	☐ GRAVITY
☐ CONVERGING WALLS	☐ FALLING OBJECTS	☐ MECHANICAL EQUIP.	☐ SUMPS/LOW SPOTS	☐ PNEUMATIC
☐ CONTAINMENT CAVITIES	☐ FIRE/EXPLOSION	☐ MOVING PARTS	☐ VEHICLES/TRAFFIC	☐ STEAM
☐ CULVERTS	☐ FLOODING	☑ NOISE	☐ VENTILATION SHAFTS	☐ OTHER:
☐ CUTS/ABRASIONS	☑ HEAT STRESS	☐ OVERHEAD HAZARDS		

CHEMICAL HAZARDS: **(LIST ALL MATERIALS AND INCLUDE MSDS, PROFILE, ANALYTICAL, ETC.)**

CHEMICAL/TRADE NAMES(S): 1) 2) 3) 4)
5) 6) 7) 8)

☐ CORROSIVE ☐ IRRITANT ☑ TOXIC (SKIN) ☑ TOXIC (INHALATION) ☑ TOXIC (INGESTION) ☐ PATHWASTE ☐ OTHER:

SECTION III PROJECT PLANNING

OPERATIONS TO BE PERFORMED

☐ ABRASIVE BLASTING	☐ EXCAVATIONS	☐ INERTING	☐ SAMPLING	☐ ULTRASONIC TESTING
☐ BACKHOE/BOBCAT	☐ GRINDING	☐ PAINTING	☐ SCARIFYING	☐ VACTOR/CUSCO
☐ BUCKETING MATERIAL	☐ HOTSY	☐ PNEUMATIC TOOLS	☐ SET TANK LEGS	☐ VACUUM TRUCK
☐ DRUM LOADERS	☐ HOT WORK	☐ PRESSURE WASHING	☐ SOLVENT CLEANING	☑ OTHER: Remove Scaffolding.

PERSONAL PROTECTIVE EQUIPMENT - IDENTIFY RESCUE GEAR IN SECTION IX

☐ SUPPLIED AIR RESP. W/EGRESS BOTTLE	☑ OUTER GLOVES: PVC	☐ RAIN GEAR	☐ DI-ELECTRIC GLOVES AND BOOTS
☐ AUDIBLE ALARM (MANDATORY WITH SAR)	☑ INNER GLOVES: Latex	☐ HARD HATS	☐ FACE SHIELD
☑ SCBA Stand By.	☑ BOOTS:	☐ HEARING PROTECTION	☐ CUT RESISTANT PPE
☐ AIR PURIFYING RESPIRATOR ☐ FULL FACE	☑ COVERALLS: CPFIS	☐ SPLASH GOGGLES	☐ NOMEX COVERALLS
CARTRIDGE TYPE: ☐ 1/2 FACE	☐ SEAM TYPE:	☐ BARRIER CREAM	☐ OTHER:

ENTRY COMMUNICATIONS

☑ VISUAL ☑ VERBAL W/OUT RADIO ☐ OUTSIDE EMERG. COMM. ESTABLISHED ☐ ELECTRONIC EXPLOSION PROOF
☑ HAND SIGNALS ☐ ROPE TUGS ☐ OTHER SIGNALING METHOD:

FIRE SAFETY

☐ CO_2 EXTINGUISHER (2-15 LB UNITS REQ'D) ☐ FIRE HOSE READY ☐ HOT WORK PERMIT ☑ BONDING/GROUNDING
☑ DRY CHEM EXTINGUISHER (2-20 lb UNITS REQ'D) ☐ FIRE DEPT. STANDBY ☐ FIRE WATCH ☑ AMBIENT LEL TESTING

SECTION IV HAZARDS CONTROL

ATMOSPHERIC HAZARD CONTROLS

☐ PURGING ☐ FLUSHING ☑ MECHANICAL VENTILATION ☐ PHYSICAL BARRIERS ☐ MINIMIZE VERTICAL DROP OF DRY MATERIALS
☐ INERTING ☐ ISOLATION ☑ *EXHAUST* ☐ *FORCED (CONTACT H&S)* ☐ WET SWEEPING

PHYSICAL HAZARD CONTROLS

☐ AIR POWERED TOOLS	☐ EXPLOSION-PROOF LIGHTING	☐ HOT WORK PERMIT	☐ NON-SPARKING TOOLS
☐ AREA TRAFFIC CONTROL	☑ FALL PROTECTION	☐ LADDERS SECURED	☐ PROTRUSIONS MARKED
☐ BOND/GROUNDING	☐ GFCI USED	☑ LIGHTING AT ENTRYWAY	☐ REMOTE HANDLING TOOLS
☐ COLD STRESS MONITORING	☑ HEAT STRESS MONITORING	☑ LO/TO CONTROLS	☐ SUMPS MARKED & BLOCKED
☐ DI-ELECTRIC BLANKETS	☐ HOT SURFACES COVERED	☐ NON-CONDUCTIVE EQUIPMENT	☐ WORK SURFACE IMPROVED

CHEMICAL HAZARD CONTROLS

☐ BARRIER CREAM	☐ LOCAL VENTILATION	☐ PATHWASTE TRAINING	☐ HEPA UNITS	☑ SAFETY SHOWER
☐ DILUTION	☐ PATHWASTE SHOTS	☐ REMOTE HANDLING	☑ PERS. PROT. EQUIP.	☑ EYEWASH

SECTION V ATMOSPHERIC MONITORING

INSTRUMENT	*CALIB. DATE*	*INSTRUMENT*	*CALIB. DATE*	*INSTRUMENT*	*CALIB. DATE*
☐ DETECTOR TUBES		☐ FLAME IONIZATION (FID)		☑ 4 GAS METER	11-22-99
☑ PHOTO IONIZATION (PID)	11-22-99	☐ O_2/ LEL METER		☐ PERSONAL PUMP	
☐ OTHER:					

ACTION LEVELS (FOR ACCEPTABLE ENTRY CONDITIONS)

LEVEL C RANGE: OXYGEN 19.5 - 22.0% O_2 LEL<10.0% CO 0 - 15 ppm H_2S 0 - 5 ppm TOXINS 0-70 - Level D. 77070ppm
LEVEL B RANGE: OXYGEN 19.5 - 22.0% O_2 LEL<10.0% CO 15 - 1200 ppm H_2S 5 - 100 ppm TOXINS

SECTION XII PHYSICAL HAZARD DATA SHEET

TASK

_____ ABRASIVE BLASTING (1)
_____ ABRASIVE WHEELS AND TOOLS (1)
✓ AIR COMPRESSOR (1)
_____ BOBCAT LOADER (1)
_____ BONDING & GROUNDING (3)
_____ CHAINSAW (1)
_____ COLD STRESS (3)
_____ COMPRESSED GAS CYLINDER HANDLING (1)
✓ CONFINED SPACE ENTRY (3)
✓ CONTROL OF HAZARDOUS ENERGY (3) (Lock-out/Tag-out)
_____ CRANES (1)
_____ DRUM HANDLING (4)
_____ EXCAVATING & TRENCHING (3)
_____ EXCAVATION/BACKHOE EQUIPMENT (1)
_____ FALLING OBJECTS (1)
_____ FLOOR HOLES (1)
✓ HAND TOOLS (1)
✓ HEAT STRESS (3)
✓ HOTSY (1)
✓ HOUSEKEEPING (1) Annual

TASK

_____ INERTING SPACES (1)
_____ LADDERS (1)
✓ LIGHTING (1) Limited
_____ MANUAL LIFTING (5)
✓ MARINE SAFETY (2)
✓ NOISE (1,3)
_____ OVERHEAD WIRES (1)
_____ PERSONNEL LIFTS (1)
_____ PNEUMATIC HAMMER (1)
_____ POWER TOOLS (INCLUDING: Electric; Hydraulic; Pneumatic; Etc.) **(1) Rev.**
_____ RIGGING
_____ SCAFFOLDS (1)
✓ SHARP OBJECTS (1)
_____ SLIPS, TRIPS AND FALLS (1)
_____ TRACK CLEANING PROCESS (3)
_____ VACUUM TRUCK OPERATION (1)
_____ WELDING, CUTTING, BURNING (1)
_____ WORKING AT ELEVATION (1)
_____ WORK ZONE TRAFFIC CONTROL (1)

FOOTNOTES:

(1)—Attach Physical Hazard Data Sheet

(2)—Attach/Complete Checklists

(3)—Attach/Refer to Program

(4)—Attach/Refer to Guidance Manual

(5)—Attach/Refer to Training Program

HAZ15540

CleanHarbors

HAZARDOUS WORK PERMIT

CLIENT: CHESI - PLANT
ADDRESS: 7515 HARVEST RD
CLIENT CONTACT NAME: GARY YOUNG
CLIENT CONTACT PHONE #: 18003645939
DATE: Thurs (DAY) 11-18-99 (DATE)

JOB LOCATION: HAZWASTE PAD
DIG SAFE #: N/A
CHES JOB #:
CHES LOCATION: NFS/C
CHES PHONE #: 18003645939
H&S REP.: SHAWN MALTRIC

DESCRIPTION OF WORK: Removal of Piping on tank - Set up Scafolding

EMERGENCY TELEPHONE NUMBERS
FIRE: 911 POLICE: 911 AMBULANCE/RESCUE: 911
HOSPITAL NAME & LOCATION: Columb. A Hosp (R) 156 - (R) 36 - 10 (L) on Right side

HAZARDS
- ☐ TOXIC:
- ☐ CORROSIVE:
- ☐ FLAMMABLE:
- ☐ COMBUSTIBLE:
- ☐ REACTIVE:
- ☐ PATH WASTE
- ☐ ASBESTOS
- ☑ EXTREME COLD/HEAT
- ☐ DRAINS/SUMPS
- ☑ SHARP OBJECTS
- ☐ DRILLING IN SOIL
- ☐ LIGHTING
- ☑ SLIPS/TRIPS/ FALLS
- ☐ ABRASIVE BLASTING
- ☐ SOIL EXCAVATION
- ☐ TANK EXCAVATION
- ☐ UNDERGROUND/ OVERHEAD UTILITIES
- ☐ TRENCHING
- ☐ FLOOR HOLES
- ☐ WORKING ON OR NEAR WATER
- ☐ VEHICLE TRAFFIC
- ☐ HOT WORK
- ☐ VACTOR/CUSCO
- ☑ LADDERS
- ☑ NOISE
- ☑ LIFTING
- ☐ HOTSY/WATERBLASTER
- ☐ ELEVATED WORK AREA
- ☐ LIVE ELECTRICAL CIRCUITS
- ☐ PNEUMATIC TOOLS
- ☑ DRUM HANDLING

PERSONAL SAFETY
- ☐ SUPPLIED AIR RESPIRATOR
- ☐ SAR WITH EGRESS BOTTLE
- ☑ SCBA Stand By
- ☑ AIR PURIFYING RESPIRATOR CARTRIDGE: Chem.
- ☐ BARRIER CREAM
- ☑ WORK AREA DESIGNATED
- ☑ PROTECTIVE COVERALLS TYPE: CPF I - CPF II
- ☐ FULLY ENCAPSULATING SUIT
- ☐ FLASH SUIT
- ☑ HEARING PROTECTION
- ☐ NOMEX COVERALLS
- ☐ OVERBOOTS
- ☑ OUTER GLOVES TYPE: PVC
- ☑ INNER GLOVES TYPE: Latex
- ☐ REFLECTIVE VESTS
- ☐ PROPERLY SLOPED EXCAVATION/TRENCH
- ☑ SAFETY GLASSES
- ☐ CHEMICAL GOGGLES
- ☐ FACE SHIELD
- ☐ LIFEBELT/LANYARD
- ☐ COMMUNICATIONS
- ☐ PFD'S
- ☑ HARDHATS
- ☑ EYE WASH
- ☑ SAFETY SHOWER
- ☑ FIRST-AID KIT
- ☐ VENTILATION
- ☐ EVACUATION PLAN

FIRE SAFETY
- ☑ ALARM BOX IN AREA
- Ke LOCATION: Air Horn
- ☑ WATER HOSE RUNNING
- ☑ FIRE EXTINGUISHERS TYPE: Dry Chem
- ☐ FIRE HOSE LAID OUT
- ☐ EQUIP. GROUNDED & BONDED
- ☐ NON-SPARKING TOOLS
- ☐ ELIMINATE IGNITION SOURCES
- ☐ EXPLOSION PROOF EQUIPMENT
- ☑ HOT WORK PERMIT
- ☐ FIRE BLANKET
- ☑ SMOKING AREA DESIGNATED LOCATION: Front Door outside
- ☐ AREA KEPT WET

ISOLATE EQUIPMENT
- ☐ ESTABLISH EXCLUSION ZONE
- ☐ STOP TRANSFERS
- ☐ DISCONNECT & BLANK
- ☑ POST WORK SIGNS
- ☑ CAUTION TAPE AREA
- ☑ LOCKOUT/TAGOUT

ELECTRICAL SAFETY
- ☑ LOCKOUT/TAGOUT
- ☑ EQUIPMENT GROUNDED
- ☐ GFCIS
- ☐ NON-CONDUCTIVE TOOLS

CHES PERSONNEL *PRINT NAME AND SIGNATURE*
Sylvia Haded [signature]
Gene Flora [signature]

AIR MONITORING TYPE OF METER _____ DATE LAST CALIBRATED _____
AIR MONITORING LOG REVERSE SIDE

SUBSTANCE	LEVEL B MAX.	ACTION LEVELS LEVEL C MAX.	LEVEL D. MAX.

FOREMAN'S COMMENTS/MINUTES OF SAFETY MEETING: "USE Harness + lanyard when up in lift Tie Down Valves when Unbolting - Put In Flex Bins - Decon a must when leaving Area Watch out for Overhead wires"

HEALTH & SAFETY COMMENTS:

FOREMAN'S SIGNATURE: [signature] DATE: 11-18-99
HEALTH & SAFETY SIGNATURE: DATE:

CHI 121 (9/97) (OVER)

CONFINED SPACE ENTRY PERMIT

CLIENT: Clean Harbors CHES LOCATION: [illegible] JOB NUMBER: VA
CLIENT ADDRESS: [illegible] Harvest [illegible] VA
PURPOSE OF ENTRY: [illegible]
PERMIT IS VALID FROM: [illegible] AM/PM 10-17-99 TO: [illegible] AM/PM 10-17-99

SECTION I DESCRIPTION OF SPACE

CLIENT PROVIDED INFORMATION:

SPACE IDENTIFICATION (NUMBER/NAME) [illegible] PERMIT REQUIRED? ☒ YES ☐ NO PRECAUTIONS BY CLIENT? ☐ YES ☐ NO
CLIENT/CONTRACTOR WORK IN PROGRESS ☐ YES ☒ NO (IF YES, CAN WORK BE RE-SCHEDULED? ☐ YES ☐ NO (if no contact H&S)
SPACE DIMENSIONS: LENGTH [illegible] WIDTH [illegible] HEIGHT [illegible] CAPACITY [illegible] GAL.
OPENING/ENTRYWAY: HOW MANY? [illegible] SIZE [illegible] LOCATION [illegible] ☐ VERTICAL ☒ HORIZONTAL ☐ GREATER THAN 5 FEET
KNOWN HAZARDS: [illegible]

SECTION II HAZARD ASSESSMENT - POTENTIAL HAZARDS THAT MAY BE ENCOUNTERED

ATMOSPHERIC HAZARDS:

☐ OXYGEN DEFICIENCY<19.5% ☐ OXYGEN ENRICHED >22.0% ☐ FLAMMABLE ABOVE 10% LEL ☐ TOXICS ABOVE 1/2 PEL ☐ TOXICS ABOVE 1/2 IDLH

PHYSICAL HAZARDS:

☐ ACTIVITIES NEAR AREA	☐ FLOOR HOLES	☐ HOT WORK	☐ PATHWASTE SHARPS	☐ STORED ENERGY
☐ BAFFLES	☐ ELEVATED WORK	☐ IONIZING RADIATION	☐ POWER TOOLS	☐ ELECTRICAL
☐ BURNS	☐ ELECTRICAL SHOCK	☐ LADDERS	☐ PRODUCT LINES	☐ HYDRAULIC
☐ COLD STRESS	☐ ENGULFMENT	☐ LIMITED LIGHTING	☒ SLIP/TRIP/FALLS	☐ GRAVITY
☐ CONVERGING WALLS	☐ FALLING OBJECTS	☐ MECHANICAL EQUIP.	☐ SUMPS/LOW SPOTS	☐ PNEUMATIC
☐ CONTAINMENT CAVITIES	☐ FIRE/EXPLOSION	☐ MOVING PARTS	☐ VEHICLES/TRAFFIC	☐ STEAM
☐ CULVERTS	☐ FLOODING	☒ NOISE	☐ VENTILATION SHAFTS	☐ OTHER
☐ CUTS/ABRASIONS	☐ HEAT STRESS	☐ OVERHEAD HAZARDS		

CHEMICAL HAZARDS: **(LIST ALL MATERIALS AND INCLUDE MSDS, PROFILE, ANALYTICAL, ETC.)**

CHEMICAL/TRADE NAMES(S): 1) [illegible] 2) _____ 3) _____ 4) _____
5) _____ 6) _____ 7) _____ 8) _____

☐ CORROSIVE ☐ IRRITANT ☐ TOXIC (SKIN) ☒ TOXIC (INHALATION) ☒ TOXIC (INGESTION) ☐ PATHWASTE ☐ OTHER: _____

SECTION III PROJECT PLANNING

OPERATIONS TO BE PERFORMED

☐ ABRASIVE BLASTING	☐ EXCAVATIONS	☐ INERTING	☐ SAMPLING	☐ ULTRASONIC TESTING
☐ BACKHOE/BOBCAT	☐ GRINDING	☐ PAINTING	☐ SCARIFYING	☐ VACTOR/CUSCO
☐ BUCKETING MATERIAL	☐ HOTSY	☐ PNEUMATIC TOOLS	☐ SET TANK LEGS	☒ VACUUM TRUCK
☐ DRUM LOADERS	☐ HOT WORK	☒ PRESSURE WASHING	☐ SOLVENT CLEANING	☐ OTHER: _____

PERSONAL PROTECTIVE EQUIPMENT - IDENTIFY RESCUE GEAR IN SECTION IX

☐ SUPPLIED AIR RESP. W/EGRESS BOTTLE	☐ OUTER GLOVES: [illegible]	☐ RAIN GEAR	☐ DI-ELECTRIC GLOVES AND BOOTS
☐ AUDIBLE ALARM (MANDATORY WITH SAR)	☐ INNER GLOVES: _____	☒ HARD HATS	☐ FACE SHIELD
☐ SCBA	☒ BOOTS: [illegible]	☐ HEARING PROTECTION	☐ CUT RESISTANT PPE
☐ AIR PURIFYING RESPIRATOR ☐ FULL FACE	☒ COVERALLS: [illegible]	☐ SPLASH GOGGLES	☐ NOMEX COVERALLS
CARTRIDGE TYPE: _____ ☐ 1/2 FACE	☒ SEAM TYPE: [illegible]	☐ BARRIER CREAM	☐ OTHER: _____

ENTRY COMMUNICATIONS

☐ VISUAL ☒ VERBAL W/OUT RADIO ☐ OUTSIDE EMERG. COMM. ESTABLISHED ☐ ELECTRONIC EXPLOSION PROOF
☐ HAND SIGNALS ☐ ROPE TUGS ☐ OTHER SIGNALING METHOD: _____

FIRE SAFETY

☐ CO_2 EXTINGUISHER (2-15 LB UNITS REQ'D) ☐ FIRE HOSE READY ☐ HOT WORK PERMIT ☒ BONDING/GROUNDING
☒ DRY CHEM EXTINGUISHER (2-20 lb UNITS REQ'D) ☐ FIRE DEPT. STANDBY ☐ FIRE WATCH ☐ AMBIENT LEL TESTING

SECTION IV HAZARDS CONTROL

ATMOSPHERIC HAZARD CONTROLS

☐ PURGING ☐ FLUSHING ☒ MECHANICAL VENTILATION ☐ PHYSICAL BARRIERS ☐ MINIMIZE VERTICAL DROP OF DRY MATERIALS
☐ INERTING ☐ ISOLATION ☒ *EXHAUST* ☐ *FORCED (CONTACT H&S)* ☐ WET SWEEPING

PHYSICAL HAZARD CONTROLS

☐ AIR POWERED TOOLS	☐ EXPLOSION-PROOF LIGHTING	☐ HOT WORK PERMIT	☐ NON-SPARKING TOOLS
☐ AREA TRAFFIC CONTROL	☐ FALL PROTECTION	☐ LADDERS SECURED	☐ PROTRUSIONS MARKED
☒ BOND/GROUNDING	☐ GFCI USED	☐ LIGHTING AT ENTRYWAY	☐ REMOTE HANDLING TOOLS
☐ COLD STRESS MONITORING	☐ HEAT STRESS MONITORING	☐ LO/TO CONTROLS	☐ SUMPS MARKED & BLOCKED
☐ DI-ELECTRIC BLANKETS	☐ HOT SURFACES COVERED	☐ NON-CONDUCTIVE EQUIPMENT	☐ WORK SURFACE IMPROVED

CHEMICAL HAZARD CONTROLS

☐ BARRIER CREAM	☐ LOCAL VENTILATION	☐ PATHWASTE TRAINING	☐ HEPA UNITS	☒ SAFETY SHOWER
☐ DILUTION	☐ PATHWASTE SHOTS	☐ REMOTE HANDLING	☐ PERS. PROT. EQUIP.	☒ EYEWASH

SECTION V ATMOSPHERIC MONITORING

INSTRUMENT	*CALIB. DATE*	*INSTRUMENT*	*CALIB. DATE*	*INSTRUMENT*	*CALIB. DATE*
☐ DETECTOR TUBES	_____	☐ FLAME IONIZATION (FID)	_____	☒ 4 GAS METER	_____
☐ PHOTO IONIZATION (PID)	_____	☐ O_2/ LEL METER	_____	☐ PERSONAL PUMP	_____
☐ OTHER: _____					

ACTION LEVELS (FOR ACCEPTABLE ENTRY CONDITIONS)

LEVEL C RANGE: OXYGEN 19.5 - 22.0% O_2 LEL<10.0% CO 0 - 15 ppm H_2S 0 - 5 ppm TOXINS _____
LEVEL B RANGE: OXYGEN 19.5 - 22.0% O_2 LEL<10.0% CO 15 - 1200 ppm H_2S 5 - 100 ppm TOXINS _____

SECTION XII PHYSICAL HAZARD DATA SHEET

TASK

_____ ABRASIVE BLASTING (1)
_____ ABRASIVE WHEELS AND TOOLS (1)
_____ AIR COMPRESSOR (1)
_____ BOBCAT LOADER (1)
_____ BONDING & GROUNDING (3)
_____ CHAINSAW (1)
_____ COLD STRESS (3)
_____ COMPRESSED GAS CYLINDER HANDLING (1)
_____ CONFINED SPACE ENTRY (3)
_____ CONTROL OF HAZARDOUS ENERGY (3) (Lock-out/Tag-out)
_____ CRANES (1)
_____ DRUM HANDLING (4)
_____ EXCAVATING & TRENCHING (3)
_____ EXCAVATION/BACKHOE EQUIPMENT (1)
_____ FALLING OBJECTS (1)
_____ FLOOR HOLES (1)
_____ HAND TOOLS (1)
_____ HEAT STRESS (3)
_____ HOTSY (1)
_____ HOUSEKEEPING (1)

TASK

_____ INERTING SPACES (1)
_____ LADDERS (1)
_____ LIGHTING (1)
_____ MANUAL LIFTING (5)
_____ MARINE SAFETY (2)
_____ NOISE (1,3)
_____ OVERHEAD WIRES (1)
_____ PERSONNEL LIFTS (1)
_____ PNEUMATIC HAMMER (1)
_____ POWER TOOLS (INCLUDING: Electric; Hydraulic; Pneumatic: Etc.) **(1) Rev.**
_____ RIGGING
_____ SCAFFOLDS (1)
_____ SHARP OBJECTS (1)
_____ SLIPS, TRIPS AND FALLS (1)
_____ TRACK CLEANING PROCESS (3)
_____ VACUUM TRUCK OPERATION (1)
_____ WELDING, CUTTING, BURNING (1)
_____ WORKING AT ELEVATION (1)
_____ WORK ZONE TRAFFIC CONTROL (1)

FOOTNOTES:

(1)—Attach Physical Hazard Data Sheet

(2)—Attach/Complete Checklists

(3)—Attach/Refer to Program

(4)—Attach/Refer to Guidance Manual

(5)—Attach/Refer to Training Program

HAZ15540

ATTACHMENT B

EXECUTED WASTE DISPOSAL MANIFESTS

South Carolina Department of Health and Environmental Control

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

6-8694

PLEASE PRINT or TYPE (Form designed for use on elite (12-pitch) typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. VAD988175559 — Manifest Document No.
2. Page 1 of 1

Information in the shaded areas is not required by Federal law, but is by State law

3. Generator's Name and Mailing Address: Clean Harbors Env. Service. 7515 Harvest Rd. Prince George, VA 23875
4. Generator's Phone (804) 457-1800

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: Clean Harbors Env. Ser.
6. U.S. EPA ID Number: MAD073932250

C. State Transporter's ID
D. Transporter's Phone 781-849-1800

7. Transporter 2 Company Name
8. U.S. EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: Giant Cement Corp. Highway S.C. 453 North at I-26 Harleyville, S.C. 29448
10. U.S. EPA ID Number: SCD003351699

G. State Facility's ID
H. Facility's Phone 803-496-2200

GENERATOR

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. R.Q. waste Flammable Liquid, N.O.S. 3, UN 1993, PG II (Benzene Gas)	001	TT	050000	G	D001 D018
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. HW-F0554-M002
b.
c.
d.

K. Handling Codes for Wastes Listed Above

15. Special Handing Instructions and Additional Information
In case of emergency call 1800-645-8265
ERG # 128

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Lance Wolfe — Signature: Lance Wolfe — Month Day Year 11 08 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Woodrow Smith — Signature: Woodrow Smith — Month Day Year 11 08 95

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space
a 34860 lbs. c lbs.
b lbs. d lbs.

20. Facility Owner or Operator; Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Edens — Signature: Carol Edens — Month Day Year 11 08 95

TRC 339

South Carolina Department of Health and Environmental Control

7.5405

Bureau of Solid & Hazardous Waste Mgt.
2600 Bull Street, Columbia, SC 29201
Phone: (803) 734-5200
Emergency & Holidays: (803)253-6488

PLEASE PRINT or TYPE (Form designed for use on elite [12-pitch] typewriter) Form Approved. OMB No. 2050-0039 Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID No. VAD988175055 Manifest Document No. 99014
2. Page 1 of 1

Information in the shaded areas is not required by Federal law, but is by State law.

GENERATOR

3. Generator's Name and Mailing Address: Clean Harbors Env. Ser. 7515 Harvest Rd. Prince George, Va. 23875
4. Generator's Phone (804) 452-1800

A. State Manifest Document Number: 99014
B. State Generator's ID: SAME

5. Transporter 1 Company Name: Clean Harbors Env. Services Inc
6. U.S. EPA ID Number: MAD039322250

C. State Transporter's ID: 614129 ME
D. Transporter's Phone: ~~1-800-645-8265~~ 781-849-1800

7. Transporter 2 Company Name:
8. U.S. EPA ID Number:

E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address: Giant Cement Corp. Highway SC. 457 North at I-26 Harleysville, S.C. 29448
10. U.S. EPA ID Number: SCD003351699

G. State Facility's ID:
H. Facility's Phone: 803-496-2200

11. U.S. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. R.Q. Waste Flammable Liquid N.O.S. 3, UN1993, PG II (Benzene, Gas)	001	TT	X5000	G	D001 D018
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. HV-F0554-M002
b.
c.
d.

K. Handling Codes for Wastes Listed Above

15. Special Handing Instructions and Additional Information
In case of Emergency call 1800-645-8265

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St. S.W. Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

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Printed/Typed Name: Gary K. Young
Signature: Gary K. Young
Month Day Year: 11 15 99

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Scott Morning
Signature: Scott Morning
Month Day Year: 11 16 99

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

FACILITY

19. Discrepancy Indication Space
a 34946 lbs. c lbs.
b lbs. d lbs.

20. Facility Owner or Operator; Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Edens
Signature: Carol Edens
Month Day Year: 11 16 99

MARYLAND HAZARDOUS WASTE MANIFEST

Department of the Environment - Waste Management Administration
2500 Broening Highway Baltimore, MD 21224

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. VNB981725455 Manifest Document No. 99015

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Clean Harbors Env. Services Inc, 7515 Harvest Road, Prince George VA 23875

A. State Manifest Document Number MDC 0863210

B. State Generator's ID: SAME

4. Generator's Phone (804) 452-1800

C. State Transporter's ID HWH VAD 044444918 DC VVVVV

5. Transporter 1 Company Name: Clean Harbors Env Services

6. US EPA ID Number: MA D039322759

D. Transporter's Phone 7818941800

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID HWH DC

9. Designated Facility Name and Site Address: Clean Harbors of Baltimore, 1900 Russel Street, Baltimore MD 21230

10. US EPA ID Number: MDD980555891

F. Transporter's Phone 1-617-849-1800

G. State Facility ID A-151

H. Facility's Phone 410 244 8200

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ waste Flammable liquid N.O.S. 3, UN1993 PG (II) (GAS + Sludge)	001	TT	4100	G	D018 D001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

	Haz. Code	Physical State	Specific Gravity	Percentage
a.	T	L	.8	0199
b.				
c.				
d.				

K. Handling Codes for Wastes Listed Above: a. S c. b. d.

15. Special Handling Instructions and Additional Information: In case of emergency call 1-800-645-8265 Profile U56395 ERG #130 VA114636

16. GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and Maryland Statutes or Regulation.

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Printed/Typed Name: Lance Wolfe Signature: Lance Wolfe Month Day Year 11 17 99

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name: Scott Morning Signature: Scott Morning Month Day 11 17 99

18. Transporter 2 Acknowledgement of Receipt of Materials — Date

Printed/Typed Name Signature Month Day

FACILITY

19. Discrepancy Indication Space: Section D Line 1 Shaded "7014"

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. — Date

Printed/Typed Name: Chad Solomon Signature: Chad Solomon Month Day 11 19 99

GENERATOR

In case of an emergency or spill, immediately call the National Response Center at (800) 424-8802 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3551.

MDC

MARYLAND HAZARDOUS WASTE MANIFEST

Department of the Environment - Waste Management Administration
2500 Broening Highway Baltimore, MD 21224

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. VAD 988 175 655 — Manifest Document No. 6991011

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Clean Harbors Env Services Inc
Po# 757 7515 Harvest Road
Prince George, VA 23875

4. Generator's Phone (804 452-1751

A. State Manifest Document Number MDC 0863933

B. State Generator's ID SAME

C. State Transporter's ID HWH VKD 999 060 DC

D. Transporter's Phone 781 849 1800

5. Transporter 1 Company Name: Clean Harbors Env Services inc — 6. US EPA ID Number: MAD 039 372 750

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID HWH DC

9. Designated Facility Name and Site Address
Clean Harbors Of Baltimore Inc
1910 Russell Street
Baltimore, MD 21230

10. US EPA ID Number: MDD 980 256 189

F. Transporter's Phone

G. State Facility ID A-151

H. Facility's Phone 410 244-8000

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE FLAMMABLE LIQUIDS, N.O.S. (BENZENE), 3, UN1993, III	**	177	** 288	G	D001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

	Haz. Code	Physical State	Specific Gravity	Percentage
a.	E, I	SL	4.1	100
b.				
c.				
d.				

K. Handling Codes for Wastes Listed Above
a. S c.
b. d.

15. Special Handling Instructions and Additional Information
11a U56395 D018
ERG # 128
IN EMERGENCY, CALL CHES 1-800-645-8265
wo# VA114636

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Printed/Typed Name: Gary K. Young — Signature — Month Day Year: 11 23 99

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: FRANK MOYD — Signature — Month Day: 11 23 99

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name — Signature — Month Day

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. — Date
Printed/Typed Name: Clifton Cook — Signature — Month Day: 11 23 99

MDC 0863933

In case of an emergency or spill, immediately call the National Response Center at (800) 424-8802 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3551.

EPA Form 8700-22 (3-97)

MARYLAND HAZARDOUS WASTE MANIFEST

Department of the Environment - Waste Management Administration
2500 Broening Highway Baltimore, MD 21224

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: VAD980175055 — Manifest Document No.: 99017
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Clean Harbors Env. Services Inc. 7515 Harvest Road Prince George VA. 23875
4. Generator's Phone (804) 452-1800

A. State Manifest Document Number: MDC 0863934
B. State Generator's ID: Same
C. State Transporter's ID: HWH ___ DC ___
D. Transporter's Phone: 781-849-1800
E. State Transporter's ID: HWH [illegible] DC [illegible]
F. Transporter's Phone: 781-849-1800
G. State Facility ID: A-151
H. Facility's Phone: 410 244 8200

5. Transporter 1 Company Name: Clean Harbors Env Services — 6. US EPA ID Number: MAD039322250
7. Transportert 2 Company Name: Clean Harbors Env Services Inc — 8. US EPA ID Number: MAD039322250
9. Designated Facility Name and Site Address: Clean Harbors of Baltimore, 1910 Russel Street, Baltimore, MD 21230 — 10. US EPA ID Number: MDD780551891

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous waste liquid N.O.S 9, UN 3082 PG(II) (Benzene)	004	DM	00150	G	D018
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

	Haz. Code	Physical State	Specific Gravity	Percentage		Haz. Code	Physical State	Specific Gravity	Percentage
a.	E	L	41	100	c.				
b.					d.				

K. Handling Codes for Wastes Listed Above: a. S c. b. d.

15. Special Handling Instructions and Additional Information: In Case of Emergency call 1-800-645-8265
Profile # U56395 ERG #128 1 4x55Dm VA114636

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Printed/Typed Name: Lance Wolfe — Signature: Lance Wolfe — Month Day Year: 12 08 99

17. Transporter 1 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: James Tucker — Signature: James Tucker — Month Day: 12 08 99

18. Transporter 2 Acknowledgement of Receipt of Materials — Date
Printed/Typed Name: Bruce Shelton — Signature: [signature] — Month Day: 12 11 99

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. — Date
Printed/Typed Name: Frank Giorda — Signature: [signature] — Month Day: 12 11 99

GENERATOR — TRANSPORTER — FACILITY

In case of an emergency or spill, immediately call the National Response Center at (800) 424-8802 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3551.

MDC 0000004

EPA Form 8700-22 (3-97)

VA 14636

MARYLAND HAZARDOUS WASTE MANIFEST

Department of the Environment - Waste Management Administration
2500 Broening Highway Baltimore, MD 21224

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. VAD988175055 — Manifest Document No.
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: MDC 0863937
B. State Generator's ID: SHMC
C. State Transporter's ID: MWH [illegible] DC [illegible]
D. Transporter's Phone: 1-781-[illegible]
E. State Transporter's ID: MWH DC
F. Transporter's Phone:
G. State Facility ID: A-J1
H. Facility's Phone: 1-410-354-1200

3. Generator's Name and Mailing Address: Clean Harbors Fin. Services Inc, 7500 Harbour Road, Prince George, VA 23875
4. Generator's Phone: (804) 452-1700

5. Transporter 1 Company Name: Clean Harbors Environmental Services Inc — 6. US EPA ID Number: MAD039322250
7. Transporter 2 Company Name — 8. US EPA ID Number:

9. Designated Facility Name and Site Address: Clean Harbors of Baltimore, 1610 Russel Street, Baltimore, MD. 21230 — 10. US EPA ID Number: MDD079055599

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	L. Waste No.
a. RQ Hazardous waste solid, n.o.s., UN3077 PG (II) (Bentone)	001	CM	1500	P	D018
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

	Haz. Code	Physical State	Specific Gravity	Percentage
a.	T	S	100	100
b.				
c.				
d.				

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information: MA Profile # CH010836 FLG # 130 — In case of Emergency call 1-800-645-8265

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Printed/Typed Name: Lance Wolfe — Signature: [signature] — Month Day Year: 01 28 00 — Date

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DAVID HISER — Signature: David Hiser — Month Day: 01 28 00 — Date

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day — Date

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day — Date

GENERATOR — TRANSPORTER — FACILITY

MDC 0863937

ATTACHMENT C

HEALTH AND SAFETY PLAN

CleanHarbors
ENVIRONMENTAL SERVICES, INC.
7515 HARVEST ROAD - PRINCE GEORGE, VA 23875
(804) 452-1800 - FAX (804) 452-1700
Visit our Website at www.cleannarbors.com

13.0 SITE SPECIFIC INFORMATION

Site Name: Clean Harbors Environmental Services Inc.

Site Location: 7515 Harvest Road Prince George, VA 23875

Plan Date: November 3, 1999

Revision Date:

This plan addresses those activities and operations proposed for the Closure of CHESI Prince George Hazardous Waste Management Units [HWMUs]. Project to be conducted for Clean Harbors Environmental Services Inc. by Clean Harbors Environmental Services Inc. These activities are proposed to include: Site set-up, closure procedures for each of the hazardous waste management units [HWMUs], sampling procedures and closure decontamination standards.

This Site Specific Information has been developed from the latest available information. Revisions and alterations to this plan may become necessary as further information, (i.e., environmental sampling results, changes in site conditions, changes in scope of work, etc.) , is developed or becomes available. Any proposed changes must be approved by Clean Harbors' Manager of occupational Health and Safety, prior to the on-site implementation

All on-site personnel are required to review and comply with this Health and Safety Plan. It is the responsibility of the Project Manager to ensure this plan is implemented.

13.1 SITE HISTORY

13.1.1 Former Nature of Site:

X	Industrial		Commercial
	Residential		Rural
X	Other(SPECIFY)		

Interium status part B TSDF

13.2 SITE DESCRIPTION

13.2.1 General Site Topography:

_____HILLY X FLAT _____MARSHLAND _____Other (SPECIFY)

13.2.2 Affected Area:

URBAN _____RURAL _____RESIDENTIAL X INDUSTRIAL
_____Other (SPECIFY)

13.2.3 Bodies of Water Neighboring Site:

_____OCEAN _____Other (SPECIFY)
_____STREAM _____RIVER X POND _____LAKE _____BAY

13.2.4 Approximate Site Size:
40' X 60'

(SPECIFY APPROXIMATE DIMENSIONS IN FEET)

13.2.5 Unusual Site Features:
There is a single story metal building on the Northwest side.

(SPECIFY: Process/Utility lines and proximity to site operations; overhead obstructions; Building locations; Landmarks; etc.)

13.2.6 Properties or Operations Abutting (adjacent to) the Site and Current Use:
(NOTE: SPECIFY APPROXIMATE DISTANCES TO WORK AREAS)

NORTH:	Harvest Road
SOUTH:	wooded
EAST:	industrial
WEST:	Prince George Drive

13.3 CURRENT SITE STATUS

X Active Inactive

13.3.1 Current Site Activities:

CHI OPERATIONS:

CLIENT OPERATIONS:

GOVERNMENTAL AGENCY OPERATIONS:
(Specify Agency)

ADDITIONAL SITE CONTRACTORS: Dames and Moore

13.4 SCOPE OF WORK/PROJECT OBJECTIVES

13.4.1 Service(s) Requested by Client: This closure provides for hazardous waste decontamination of the interm status Hazardous Waste Management Units [HWMUs] and the removal of hazardous waste to off-site treatment/disposal facilities in accordance with applicable state and federal regulation. Decontamination will consist of Tank T-101, Oil/water seperator S-101 and secondary containment structure.

13.5 CONTAMINANTS

13.5.1 Waste Type:

Liquid	Solid	Gas	Sludge	Other
X	X		X	

13.5.2 Waste Characteristics (from Manifest):

CORROSIVE		FLAMMABLE	X	EXPLOSIVE	
COMBUSTIBLE		VOLATILE		TOXIC	X
REACTIVE		RADIOACTIVE		OTHER	
UNKNOWN					

13.5.3 Containment:

EXCAVATION		LAGOON		BODY OF WATER	
TANK	X	DRUMS	X	TANK CAR	
PIPING	X	ROLL-OFF		PROCESS VESSEL	X
SOIL		GROUND WATER		OTHER	

13.5.4 Substances of Concern:

Provide a summary of the chemicals Known (x), or Suspected (S) to be present on-site. Indicate Concentrations by laboratory analysis, exposure monitoring results, bulk samples, etc. found in ppm, ppb, mg/l, ug/l, per cent (%), etc.

CONCENTRATION RANGE OF CHEMICALS FOUND: X or S

CHEMICAL NAME	SOIL	WATER	AIR	(METHOD1)	
Benzene		X	X		S
Lead		X	X		S

1**Reference Source / Comments:** (Indicate laboratory performing analysis and analysis method. i.e.-Total Concentration, TCLP, EP Toxic, Other):

13.5.5 Exposure Limits:

This table lists the accepted exposure limits of those substances outlined in Contaminants of Concern and Chemicals to be Used On-Site. Attach appropriate Material Safety Data Sheets (MSDS) in Appendix C.

EXPOSURE LIMITS1

	ACGIH		OSHA			
CHEMICAL NAME	TLV	STEL	PEL	STEL	IDLH	IP (eV)
Benzene	0.5ppm	2.5ppm	0.5ppm	2.5ppm	500ppm	9.24eV
Lead	0.05mg/m3		0.05mg/m3		100mg/m3	

1 Specify units i.e. ppm; mg/m3, etc.

NOTES: (For 13.5.5)

a - TLV-TWA	ACGIH, Threshold Limit Value - Time Weighted Average
b - TLV-STEL	ACGIH, Threshold Limit Value - Short Term Exposure Limit
c - PEL-TWA	OSHA, Permissible Exposure Limit - Time Weighted Average
d - PEL-STEL	OSHA, Permissible Exposure Limit - Short Term Exposure Limit
e - IDLH	NIOSH, Immediately Dangerous to Life or Health; a maximum concentration from which, in the event of respirator failure, one could escape within 30 minutes without experiencing any escape-impairing or irreversible health effects.
f - A1	ACGIH, Known Human Carcinogen
g - A2	ACGIH. Suspected Human Carcinogen
h - SKIN	This attention-calling designation refers to the potential contribution to the overall exposure through skin absorption, including mucous membranes and eye, either airborne or through direct contact with the substance.
i - CEILING	ACGIH, The concentration that should not be exceeded during any part of the working exposure.

13.5.6 Chemicals Used On-site:

Summarize the chemicals that will be brought to the site and used by CHI Personnel. (Include each product that will be on site, e.g. the decontamination solution, oil/grease for equipment maintenance, etc.). Attach appropriate MSDS in Appendix C.

CHEMICAL NAME	TASK USED FOR	QUANTITY OF CHEMICAL
Non Phosphate Detergent	Decon	5 gal.

13.6 KEY PERSONNEL and EMERGENCY NUMBERS

Indicate Location:

Prince George, VA.	Fire Department. . . . . .911 (Non-Emergency) 733-2657
Prince George, VA.	Ambulance Service. . . . . .911 (Non-Emergency) 733-2657
Prince George, VA.	Police Department . . . . . .911 (Non-Emergency) 733-2770
Prince George, VA	State Police . . . . . .911 (Non-Emergency) . . . . . .(800)552-6337

CHEMTREC.....(800) 424-9300

State Poison Control Center .....(800)552-6337

NEAREST HOSPITAL:

NAME: Columbia; John Randolph Medical Center

ADDRESS: 411 West Randolph Road, Hopewell, VA. 23860

PHONE: (804)541-1600

DIRECTIONS TO HOSPITAL FROM SITE:
(NOTE: Provide approximate distances in feet, miles, etc. between landmarks.)

Harvest Road to Route 156 - take a right and follow app. 5 miles to Route 36 - take a right - go 3 traffic lights - take a left (6th Street) - go 2 miles to Route 10 - take right thehospital is on the left.

CLEAN HARBORS OPERATIONS CONTACTS:

Project Manager

NAME Gary Young
BRANCH/DIV.: Prince George Facility
PHONE (Office) 452-1800
(Pager) 804-778-1335
(Home) 804-733-0855

General Manager

NAME Jim Nardozzi
BRANCH/DIV.: Richmond S.C.
PHONE (Office) 452-1800
(Pager) 800-366-2337
(Home) 804-530-3092

CLEAN HARBORS HEALTH AND SAFETY CONTACTS:

Regional Health and Safety Representative

NAME: Sean Maltrie
BRANCH/DIV.Baltimore/Richmond
PHONE: (410) -685-3945
PAGER: (800) -

Site Health and Safety Associate

NAME: Sean Maltrie
BRANCH/DIV.Baltimore/Richmond
PHONE: (410) -685-3945
PAGER: (800) -

Director Environmental Health and Safety

NAME: Mark Arriens CIH/CSP
PHONE: (Office) 800-805-4582 (#6360)
(Pager) 800-391-3805

Manager. occupational Safety and Health

NAME: Mark Arriens CIH/CSP
PHONE: (Office) 800-805-4582 (#6360)
(Pager) 800-391-3805

" CHESI Off-Hours phone coverage provided by Central Answering Service "

PHONE 800-282-0058

CLIENT CONTACT:

NAME: Sean Devine

TITLE: Compliance Manager

COMPANY: Clean Harbors Environmental Services Inc.

PHONE: (781) 849-1800 (#4139)

REGULATORY AGENCY CONTACTS:

FEDERAL CONTACT:

NAME: N/A

TITLE:

AGENCY:

PHONE:

STATE CONTACT:

NAME:

TITLE:

AGENCY:

PHONE:

13.7 SITE HEALTH AND SAFETY CONTROLS

The following information has been developed to identify, communicate and minimize the risk of exposure to toxic materials and physical hazards on the job site. This preliminary evaluation identifies anticipated hazards and recommends control measure to minimize recognized hazards. Additional information on hazards should be gathered during site activities and can be added to this document to supplement this plan.

Changes to this plan (i.e. changes in levels of protection, use of alternative controls, additional tasks, etc.) must be approved, by the Manager - Occupational Health and Safety, prior to initiation or implementation.

	TASK		LEVEL OF PROTECTION
1.	Site setup and decon construction areas	½ day	D
2.	Inventory removal/disposal	1 day	D
3.	Tank - 101 cleaning	1 ½ day	B/C
4.	Oil/water seperator cleaning	1 day	C
5.	Secondary containment system cleaning	2 day	C
6.	Sample handling	ongoing	D
7.			
8.			
9.			
10.			

Task No. (1) **SITE SET UP**
(Define Task Name)

This phase of the operation will include the following steps; (LIST EACH STEP REQUIRED TO COMPLETE THE TASK.)

A) Review and discuss site plan with crew.
B) Establish/construct equipment decontamination area at the North gate.
C) Barricade/fence off work zone and establish decontamination zones.
D)
E)

Task No. (1) - Hazard Identification:

CHEMICAL HAZARDS associated with this task are anticipated to include.

- Refer to Section 13.5.4 and 13.5.5
- Refer to Attached Material safety Data Sheets

PHYSICAL HAZARDS associated with this task are anticipated to include:

- Complete a Physical Hazard Evaluation Sheet (PHES) and attach appropriate Physical Hazard Data or programs. _____

_____

_____

- Others (not listed on the PHES): _____

_____

_____

BIOLOGICAL HAZARDS associated with this task are anticipated to include: **NONE**

Task No. (1) - Work Practices/Engineering Controls

To reduce anticipated hazards described above, on-site personnel shall follow the site specific work practices and engineering controls listed below:

- Refer to standard Work Practice, Section 9.0
- Refer to Physical Hazard Control Sheets
- List other:

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CleanHarbors

Environmental Services, Inc.

Task No. (1) - Personnel Protective Equipment:

Clean Harbors' Level **D** Personnel Protection shall be utilized and include the following.

a) ( ) Respirator (Indicate type and facepiece):
b) ( ) Filter Element (If applicable)
c) ( ) Coverall material
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x) Eye protection; (x) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment:
(x) Hearing protection (min. NRR2E)
( )Waders-steel toe
(x) Overboots
j) ( ) Others. >

In addition, all openings will be securely taped to further reduce possibility of skin contact.

If Clean Harbors' Level **C** Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): APR-Full face
b) (x) Filter Element (If applicable) **P100**
c) (x) Coverall material **CPF II**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) ( ) Eye protection; ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment:
(x) Hearing protection (min. NRR2E)
( )Waders-steel toe
(x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to reduce possibility of skin contact.

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Task No. (2) **Inventory Removal/Disposal**
(Define Task Name)

This phase of the operation will include the following steps; (LIST EACH STEP REQUIRED TO COMPLETE THE TASK.)

A) Provide VAC truck to pump remaining liquid/sludge from T-101
B) VAC truck to be grounded/bonded
C) 3" suction hose will be placed inside tank
D) VAC truck will then be manifested to Giant for disposal.
E)

Task No. (2) - Hazard Identification:

CHEMICAL HAZARDS associated with this task are anticipated to include.

- Refer to Section 13.5.4 and 13.5.5
- Refer to Attached Material safety Data Sheets

PHYSICAL HAZARDS associated with this task are anticipated to include:

- Complete a Physical Hazard Evaluation Sheet (PHES) and attach appropriate Physical Hazard Data or programs. _____

_____

_____

- Others (not listed on the PHES): _____

_____

_____

BIOLOGICAL HAZARDS associated with this task are anticipated to include: **NONE**

Task No. (2) - Work Practices/Engineering Controls

To reduce anticipated hazards described above, on-site personnel shall follow the site specific work practices and engineering controls listed below:

- Refer to standard Work Practice, Section 9.0
- Refer to Physical Hazard Control Sheets
- List other:

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Task No. (2) - Personnel Protective Equipment:

Clean Harbors' Level **D** Personnel Protection shall be utilized and include the following.

a) ( ) Respirator (Indicate type and facepiece): _____ _____
b) ( ) Filter Element (If applicable)
c) (x) Coverall material **CPF II**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x) Eye protection; (x) Glasses w/side shields, (x) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment:
(x) Hearing protection (min. NRR2E)
( )Waders-steel toe
(x) Overboots
j) ( ) Others. > _____

In addition, all openings will be securely taped to further reduce possibility of skin contact.

If Clean Harbors' Level **C** Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): **APR-full face**
b) (x) Filter Element (If applicable) **P-100**
c) (x) Coverall material **CPF II**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x) Eye protection; (x) Glasses w/side shields, (x) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment:
(x) Hearing protection (min. NRR2E)
( )Waders-steel toe
(x) Overboots
j) ( ) Others: > _____

In addition, all openings will be securely taped to reduce possibility of skin contact.

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Task No. (3) Tank T-101 Decontamination and Associated Ancillary Equipment
(Define Task Name)

This phase of the operation will include the following steps; (LIST EACH STEP REQUIRED TO COMPLETE THE TASK.)

A) Collect water samples from rinse source and retain.
B) Access will be gained thru top manway.
C) When entry required, it will be accessed thru the side manway.
D) All residual water will be removed with the VAC truck.
E) An initial hot water pressure washer with Simple Green will be used-all rinse to be pumped into a tanker.
F) Tank may include scraping
G) Heavy solids will be placed in drums.
H) Tank will then be triple rinsed with app. 2.5% volume per rinse.
I) A representative sample of the final rinse will be collected and retained in accordance with Section 3.6 of the Closure Plan.
J) Ancillary piping and equipment will be removed and packaged into containers for disposal.

Task No. (3) - Hazard Identification:

CHEMICAL HAZARDS associated with this task are anticipated to include.

- Refer to Section 13.5.4 and 13.5.5
- Refer to Attached Material safety Data Sheets

PHYSICAL HAZARDS associated with this task are anticipated to include:

- Complete a Physical Hazard Evaluation Sheet (PHES) and attach appropriate Physical Hazard Data or programs.

Others (not listed on the PHES):

BIOLOGICAL HAZARDS associated with this task are anticipated to include: **NONE**

Task No. (3) - Work Practices/Engineering Controls

To reduce anticipated hazards described above, on-site personnel shall follow the site specific work practices and engineering controls listed below:

- Refer to standard Work Practice, Section 9.0
- Refer to Physical Hazard Control Sheets
- List other:

Task No. (3) - Personnel Protective Equipment:

Clean Harbors' Level **B** Personnel Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): **SAR**
b) ( ) Filter Element (If applicable) **N/A**
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x)___Eye protection; ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to further reduce possibility of skin contact.

If Clean Harbors' Level **C** Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): **APR - full face**
b) (x) Filter Element (If applicable) **P 100**
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x) Eye protection; ( ) Glasses w/side shields, (x) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to reduce possibility of skin contact.

Task No. (4) Oil/Water Seperater Cleaning

(Define Task Name)

This phase of the operation will include the following steps; (LIST EACH STEP REQUIRED TO COMPLETE THE TASK.)

A) All waste water/petroleum and sludge will be removed and placed into drums.
B) The interior will be scraped down to remove hardened residuels.
C) The unit will then be pressure washed with a hot water pressure washer and the rinses will be placed into drums.
D) A triple rinse will be preformed with each rinse being approx. 5% of volume.
E) A representative sample will be taken from the final rinse.
F) Ancillary equipment and pipelines will be removed and packaged into containers for disposal.

Task No. (4) - Hazard Identification:

CHEMICAL HAZARDS associated with this task are anticipated to include.

- Refer to Section 13.5.4 and 13.5.5
- Refer to Attached Material safety Data Sheets

PHYSICAL HAZARDS associated with this task are anticipated to include:

- Complete a Physical Hazard Evaluation Sheet (PHES) and attach appropriate Physical Hazard Data or programs.

Others (not listed on the PHES):

BIOLOGICAL HAZARDS associated with this task are anticipated to include: NONE

Task No. (4) - Work Practices/Engineering Controls

To reduce anticipated hazards described above, on-site personnel shall follow the site specific work practices and engineering controls listed below:

- Refer to standard Work Practice, Section 9.0
- Refer to Physical Hazard Control Sheets
- List other:

Task No. (4) - Personnel Protective Equipment:

Clean Harbors' Level **C** Personnel Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): **APR-full face**
b) (x) Filter Element (If applicable) **P100**
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x)___Eye protection; ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to further reduce possibility of skin contact.

If Clean Harbors' Level **D** Protection shall be utilized and include the following.

a) ( ) Respirator (Indicate type and facepiece):
b) ( ) Filter Element (If applicable)
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x) Eye protection; ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to reduce possibility of skin contact.

Task No. (5) Secondary Containment System Cleaning
(Define Task Name)

This phase of the operation will include the following steps; (LIST EACH STEP REQUIRED TO COMPLETE THE TASK.)

A) Proffesional engineer will inspect/identify all cracks/gaps.
B) Areas identified will be filled/sealed.
C) All surfaces will be scraped and swept with sand to act as an abrassive.
D) Surfaces will then be pressure washed with a hot water washer and collected into drums.
E) Once cleaned the surface will be triple rinsed.
F) A representative sample will be obtained from the final rinse.
G) As directed, core samples will be taken in locations where, most likely, contamination has migrated.

Task No. (5) - Hazard Identification:

CHEMICAL HAZARDS associated with this task are anticipated to include.

- Refer to Section 13.5.4 and 13.5.5
- Refer to Attached Material safety Data Sheets

PHYSICAL HAZARDS associated with this task are anticipated to include:

- Complete a Physical Hazard Evaluation Sheet (PHES) and attach appropriate Physical Hazard Data or programs.

Others (not listed on the PHES):

BIOLOGICAL HAZARDS associated with this task are anticipated to include: **NONE**

Task No. (5) - Work Practices/Engineering Controls

To reduce anticipated hazards described above, on-site personnel shall follow the site specific work practices and engineering controls listed below:

- Refer to standard Work Practice, Section 9.0
- Refer to Physical Hazard Control Sheets
- List other:

Task No. (5) - Personnel Protective Equipment:

Clean Harbors' Level **C** Personnel Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): **APR-full face**
b) (x) Filter Element (If applicable)**P100**
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x)___Eye protection: ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to further reduce possibility of skin contact.

If Clean Harbors' Level **D** Protection shall be utilized and include the following.

a) ( ) Respirator (Indicate type and facepiece):
b) ( ) Filter Element (If applicable)
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x) Eye protection; ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to reduce possibility of skin contact.

Task No. (6) Sample Handling

(Define Task Name)

This phase of the operation will include the following steps; (LIST EACH STEP REQUIRED TO COMPLETE THE TASK.)

Refer to section 3.6 of the Closure Plan.

Task No. (6) - Hazard Identification:

CHEMICAL HAZARDS associated with this task are anticipated to include.

- Refer to Section 13.5.4 and 13.5.5
- Refer to Attached Material safety Data Sheets

PHYSICAL HAZARDS associated with this task are anticipated to include:

- Complete a Physical Hazard Evaluation Sheet (PHES) and attach appropriate Physical Hazard Data or programs.

Others (not listed on the PHES):

BIOLOGICAL HAZARDS associated with this task are anticipated to include: **NONE**

Task No. (6) - Work Practices/Engineering Controls

To reduce anticipated hazards described above, on-site personnel shall follow the site specific work practices and engineering controls listed below:

- Refer to standard Work Practice, Section 9.0
- Refer to Physical Hazard Control Sheets
- List other:

Task No. (6) - Personnel Protective Equipment:

Clean Harbors' Level **D** Personnel Protection shall be utilized and include the following.

a) ( ) Respirator (Indicate type and facepiece):
b) ( ) Filter Element (If applicable)
c) (x) Coverall material **CPF III**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) (x)___Eye protection; ( ) Glasses w/side shields, (x) Face shield, (x) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to further reduce possibility of skin contact.

If Clean Harbors' Level **C** Protection shall be utilized and include the following.

a) (x) Respirator (Indicate type and facepiece): **APR-full face**
b) (x) Filter Element (If applicable) **P100**
c) (x) Coverall material **CPF I**
d) ( ) Coverall material
e) (x) Inner gloves LATEX
f) (x) Steel toe work boots
g) (x) Hard hat
h) ( ) Eye protection; ( ) Glasses w/side shields, ( ) Face shield, ( ) Splash goggles, ( ) Dust goggles
i) (x) Additional equipment: (x) Hearing protection (min. NRR2E) ( )Waders-steel toe (x) Overboots
j) ( ) Others: >

In addition, all openings will be securely taped to reduce possibility of skin contact.

13.8 PHYSICAL HAZARD EVALUATION SHEET

TASK NUMBER	HAZARD	ACTION
	ABRASIVE BLASTING	Attach Physical Hazard Data Sheet
	BOBCAT LOADER	Attach Physical Hazard Data Sheet
2, 3, 4	BONDING & GROUNDING	Attach/Refer to Program
	CHAIN SAW	Attach Physical Hazard Data Sheet
ALL	COLD STRESS	Attach/Refer to Program
3	COMPRESSED GAS CYLINDER HANDLING	Attach Physical Hazard Data Sheet
3	CONFINED SPACE ENTRY	Attach/Refer to Program
3, 4	CONTROL OF HAZARDOUS ENERGY (Lock-out/Tag-Out) Attach/Refer to Program	
	CRANES	Attach Physical Hazard Data Sheet
ALL	DRUM HANDLING	Attach/Refer to Guidance Manual (Chapter I)
	EXCAVATING & TRENCHING	Attach/Refer to Program
	EXCAVATION/BACKHOE	Attach Physical Hazard Data Sheet
	EXPLOSIVE ACTUATED FASTENING DEVICES	Attach Physical Hazard Data Sheet
ALL	FALLING OBJECTS	Attach Physical Hazard Data Sheet
ALL	FLOOR HOLES	Attach Physical Hazard Data Sheet
ALL	HAND TOOLS	Attach Physical Hazard Data Sheet
ALL	HEAT STRESS	Attach/Refer to Program
ALL	HOTSY	Attach Physical Hazard Data Sheet
ALL	HOUSEKEEPING	Attach Physical Hazard Data Sheet
	HYDRO-BLASTER	Attach Physical Hazard Data Sheet
	INERTTNG SPACES	Attach Physical Hazard Data Sheet
ALL	LADDERS	Attach Physical Hazard Data Sheet
ALL	LIGHTING	Attach Physical Hazard Data Sheet
ALL	MANUAL LIFTING	Attach /Refer to Training Program
	MARINE SAFETY	Attach/Complete Checklist
	OVERHEAD WIRES	Attach Physical Hazard Data Sheet
	PERSONNEL LIFTS	Attach Physical Hazard Data Sheet
	PNEUMATIC HAMMER	Attach Physical Hazard Data Sheet
	POWER TOOLS	Attach Physical Hazard Data Sheet
	RIGGING	Attach Physical Hazard Data Sheet
3	SCAFFOLDS	Attach Physical Hazard Data Sheet
ALL	SHARP OBJECTS	Attach Physical Hazard Data Sheet
ALL	SLIPS, TRIPS, AND FALLS	Attach Physical Hazard Data Sheet
2, 3	VACUUM TRUCK OPERATIONS	Attach Physical Hazard Data Sheet
3, 4	WELDING, CUTTING, BURNING	Attach Physical Hazard Data Sheet
	WORKING AT ELEVATORS	Attach Physical Hazard Data Sheet
	WORK ZONE TRAFFIC CONTROL	Attach Physical Hazard Data Sheet

13.9 ACTION LEVELS1

MAXIMUM CONCENTRATION

SUBSTANCE	LEVEL B2	Level C3	PEAK	LEVEL D
LEAD	2.5mg/m3	0.25mg/m3		0.025mg/m3
BENZENE	2.5ppm	0.5ppm		0.05ppm

NOTES:

1 Concentrations are maximums for the Level of Protection. If these concentrations are exceeded, unless addressed below, the level of protection must be upgraded.

2 If the airborne levels exceed this concentration, even instantaneously, **STOP WORK IMMEDIATELY** and contact the Regional Health and Safety Representative, Corporate Industrial Hygienist, or the Manager-Occupational Health and Safety.

3 Airborne levels may exceed the Level C limit for up to five (5) minutes so long as the PEAK MAXIMUM concentration is not exceeded. This may happen up to three (3) times during any eight (8) hour shift.

IF: **PEAK** is exceeded at any time;

and/or

LEVEL "C" MAXIMUM is exceeded more than three (3) times in any one shift;

THEN: UPGRADE TO LEVEL "B", IMMEDIATELY.

13.10 WORK ZONES

The specific location and size of the work zones will be determined by the Project Manager. The decision will be based on the latest available information including scope of work, environmental conditions, site conditions, and direct reading instrument monitoring results. (Refer to Section 5.0 of the Site Specific Plan for Determination Criteria,)

13.11 SITE MONITORING

13.11.1 Monitoring Equipment:

PID X	DUST MONITOR	FID
MERCURY (JEROME	for GAS	DETECTOR TUBES X
GEIGER	PERSONAL PUMP	OTHER
NOISE		

13.11.2 Frequency and Methods of Site Monitoring

The Project Manager is responsible for ensuring air monitoring is conducted and that personnel protection and site integrity are maintained. Air monitoring shall be conducted periodically, and when changes occur in work practices, procedures, locations, or tasks.

The Project Manager shall be responsible for ensuring a daily, site/personnel monitoring log, (using CHI Atmospheric Monitoring Log, or equivalent) is maintained on site.

13.11.3 Documentation

The Project Manager is responsible for assuring that monitoring results are properly obtained, documented and maintained in appropriate locations. Additionally, the Project Manager is responsible for assuring that samples requiring analysis are promptly submitted to Clean Harbors' Analytical Services (CHAS) and sample pumps are post-calibrated.

Recording Forms

Atmospheric Monitoring Logs - Used to record direct reading instrument results. The Hazardous Work/Confined Space Entry Permit may also be used for this purpose. Additional sheets or blank sheets may be used if the forms are not sufficient to record all data.

Air Sampling Worksheet - Used to record data for personal exposure monitoring. ALL! information on this form must be completed before submittal to CHAS.

Copies - After monitoring is complete the Project Manager should retain the COLLECTOR COPY and place it in the job folder. The remaining two (2) copies should be submitted to CHAS.

Other Forms - Other forms than those mentioned above, may be used with permission of the Health and Safety Department.

13.12 DECONTAMINATION

All personnel and equipment leaving the Exclusion Zone must be thoroughly decontaminated before passing to the Support Zone. The Project Manager must designate decontamination stations, as necessary, and continually evaluate and implement the site Specific decontamination procedures.

Based on the associated hazards and levels of protection required with this operation, the following steps shall be followed during the decontamination of personnel and personal protective equipment

Step 1 - SEGREGATED EQUIPMENT DROP:
Deposit equipment used on site on plastic drop cloths.

Step 2 - BOOT COVER, GLOVE, CHEMICAL - RESISTANT COVERALL WASH/RINSE:
Outer gloves, boot covers, and chemical protective clothing will be rinsed to remove any visible contaminants.

Step 3 - TAPE REMOVAL:
Remove tape from around boot covers and outer gloves and deposit in appropriate waste container.

Step 4 - BOOT COVER AND OUTER GLOVE REMOVAL:
Remove boot covers, followed by cuter glove removal, and deposit in appropriate waste container.

Step 5 - CHEMICAL RESISTANT SUIT REMOVAL:
Remove chemical resistant suit and deposit in appropriate waste container.

Step 6 - RESPIRATOR REMOVAL:
Remove respirator and place in soap/water solution for further cleaning and decontamination.

Step 7 - INNER GLOVE REMOVAL:
Remove inner gloves and place in appropriate waste container.

The Project Manager shall be responsible for establishing the appropriate decontamination stations at which these steps shall be performed. If appropriate, a more comprehensive decontamination procedure will be utilized. Refer to Section 7.0 of the Site Specific Plan for additional steps.

13.13 SITE MAPS

13.13.1 Detailed Site Map:

Attached is a detailed site map, 8 ½ x 11 ½ , or 8 ½ x 14"). Included on the map are the following.

1) Map Orientation, (i.e., N, S, E, & W);

2) Anticipated Work Zone locations,
(i.e., Hot, Decontamination Reduction, etc.)

3) Location of all above/below ground utilities;

4) Any unusual site features;
(i.e., cliffs, ditches, streams, etc.)

5) If applicable, locations where photos of site were taken;

13.13.2 Hospital Route Map:

Attached is a route map to the nearest hospital, (with directions from the site highlighted), as identified under Key Personnel and Emergency Numbers.

APPENDIX - B:

COMPLIANCE AGREEMENT:

All on-site personnel, (i.e., CHI employees and subcontractors), must complete and sign this section prior to the commencement of site activities for the >Ethyl leaded gasoline tank cleaning.

I have read and understand the contents of this site specific health and safety plan, and have had all relevant questions answered to my satisfaction. In addition, I agree to comply with the conditions/provisions outlined therein:

NAME (Print)	SIGNATURE	COMPANY/ CHI BRANCH	DATE
TIMOTHY FOSTER	[illegible]	NORFOLK	11-17-99
Chris Jeffer	Chris Jeffer	Richmond	11-17-99
William Martin	[illegible]	Richmond	11-17-99
Steve Boddorf	[illegible]	Norfolk	11-17-99
William Martin	[illegible]	Richmond	11-17-99
Tim Pearson	Tim Pearson	Prince George	11-17-99
Lance Wolfe	[illegible]	Prince George	11-17-99

Page ____ of ____

APPENDIX - B

COMPLIANCE AGREEMENTS

All on-site personnel, (i.e., CHI employees and Subcontractors), must complete and sign this section prior to the commencement of site activities for the _____ (Return a signed copy of this document to Corporate EH&S).

I have read and understand the contents of this site specific health and safety plan, and have had all relevant questions answered to my satisfaction. In addition, I agree to comply with the conditions/provisions outlined therein.

NAME (Print)	SIGNATURE	COMPANY/ CHI BRANCH	DA
Steve Baldorf		STEVE Baldorf CHI	

APPENDIX - C

APPROPRIATE MATERIAL SAFETY DATA SHEETS (MSDS)

APPENDIX - A

PLAN APPROVAL AGREEMENT

The following individuals have reviewed the site specific health and safety plan for _____ . They are responsible for implementing and enforcing the procedures and items covered by this plan. In addition, any revisions or alterations to this plan must be approved by Clean Harbors' Manager, Occupational Health and Safety prior to implementation.

Notify Mark Arriens of E alterations or deviations from the procedures, requirements, etc., listed in this plan, (Return a signed copy of this document to Corporate EH&S).

Regional EH&S Representative Shawn Moultrie Date: 11/4/99

Project Manager [signature] Date: 11/4/99

Project Supervisor Robert Cerch Date 11/4/99

Branch Manager [signature] Date 11/3/99

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 859048 • BRAINTREE, MA 02185-9048
(781) 849-1800
Visit our Website at www.cleanharbors.com

Via Federal Express

July 5, 2000

Mr. Dennis H. Treacy, Director
Virginia Departmnet of Environmental Quality
629 East Main Street
Richmond, VA 23219

Re: Closure Report and Certification
Clean Harbors Environmental Services, Inc.
EPA ID No. VAD 988 175 055

Dear Mr. Treacy:

Please find enclosed one (1) copy, with original signature, of the Closure Report and Certification for Clean Harbors Environmental Services, Inc.'s hazardous waste facility located at 7515 Harvest Road, Prince George, Virginia. One (1) original copy has also been submitted to Ms. Debra Miller at the Virginia Department of Environmental Quality.

Please don't hesitate to contact me at 781-849-1800 extension 1278 if you have any questions regarding this sumbittal.

Sincerely,

Peter W. Egan
Director of Regulatory Affairs

cc: Debra Miller, VADEQ (Via Federal Express)
Robert Shaffer, URS Dames & Moore
Gary Young, CHESI

URS
Dames & Moore

5540 Falmouth Street, Suite 201
Richmond, VA 23230

HAZARDOUS WASTE MANAGEMENT UNIT

CLOSURE REPORT AND CERTIFICATION

Prepared for:

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
7515 HARVEST ROAD
PRINCE GEORGE, VIRGINIA

EPA ID NUMBER: VAD 988 175 055

URS/D&M Job No. 30898-005-155

June 28, 2000

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1.0 INTRODUCTION

The Clean Harbors Environmental Services, Inc. (CHESI) facility is an interim status hazardous waste storage and treatment facility that operates a treatment facility for petroleum products and water mixtures. The facility had interim status for its hazardous waste storage units (HWMUs), which include Tank T-101 (15,000 gallon waste tank), an oil/water separator S-101, and the secondary containment system. Figure 1 depicts the facility layout.

Since the storage tank and oil water separator held interim status and the facility does not intend to pursue permitting, closure per the Virginia Hazardous Waste Management Regulations (VHWMR) was determined necessary. CHESI submitted a closure plan to the Virginia DEQ that was approved by the DEQ on September 21, 1999, and amended March 8, 2000. The approved Closure Plan provides for hazardous waste decontamination of the interim status HWMUs and the treatment of hazardous waste in accordance with all applicable regulations.

CHESI retained URS Dames & Moore (URS) to provide an independent registered Virginia professional engineer to certify the closure activities, as required by the approved Closure Plan. Tank T-101 and oil/water separator S-101 were certified closed in a Partial Closure Report completed by URS and dated January 28, 2000. This closure report pertains to activities related to the secondary containment system. The certification report is presented in Section 5.0 of this document.

In Section 5.0 of the Closure Plan, the necessary components of the Closure Report and Certification are identified. Per Section 5.0 of the Closure Plan, the Closure Report shall contain, at a minimum, the following information:

- A summary of closure activities for each unit;
- If applicable, the depth of any excavation;
- Results of all statistical analyses and sample calculations;
- If performed, the risk assessment results and conclusions with sample calculations;
- A summary sheet of all sampling results;
- A copy of the lab-generated sampling analysis forms;
- A summary of the QA/QC findings; and
- A synopsis on the proper disposal of waste generated during closure activities.

This report addresses the applicable portions of the information identified above. Given the limited scope of the Partial Closure effort, none of the following activities were conducted, nor were necessary, to achieve partial closure of the unit addressed in this report:

- Final waste inventory removal;
- Equipment removal and disposal; and
- Excavation of soil or concrete.

2.0 SUMMARY OF CLOSURE ACTIVITIES

Two of the three HWMUs referenced in the Plan (Tank T-101 and Oil Water Separator S-101) have been closed and certified in a Partial Closure report submitted under separate cover. Approval of the Partial Closure report for those two units was received from VDEQ on March 30, 2000.

The summary of closure activities discussed herein focuses on the third of the three units: the Secondary Containment System. Figure 2 depicts the HWMU layout, relative to each other. A summary of closure activities for each of this unit is presented below.

2.1 SECONDARY CONTAINMENT STRUCTURE DESCRIPTION

The secondary containment system is an area approximately 40 ft x ~~50~~ 60 ft consisting of a 6-inch thick fiber-reinforced concrete, with added crack control from welded wire fabric. As is typical for slab-on-grade construction, the pad was created with six poured sections separated by construction joints. A 28 inch ~~three-foot~~ high concrete/painted block dike wall surrounds the area and a six-foot high chain link fence is mounted on top of the dike wall. Two drainage sumps are located at either end of the 50-foot length. A roll-over ramp serves as the access way for a fork-lift.

As was required by the modified Plan, a professional engineer inspected the containment area for overall condition and the presence of cracking; cracking that could represent potential migratory pathways. Based upon this inspection, a diagram was generated that depicted the location of potential migratory pathways. This diagram is presented as Figure 3.

As can be seen by Figure 3, several potential migratory pathways existed. These included:

- Construction joints that separate the pour sections;
- Cracks through the dike wall; and
- Random expansion/contraction cracks on the surface of the pad that are common to slab-on-grade pads.

By design, the construction joints extend the entire thickness of the concrete and therefore represent a potential migratory pathway. In addition, several cracks were noted on the dike interior that existed within six inches of the containment system's floor. Upon further inspection, four were noted to repeat on the exterior of the wall, therefore representing a potential pathway. The random cracks, however, were not as readily evaluated as to their potential as a pathway. Invasive techniques were necessary to evaluate the random cracks.

2.2 SECONDARY CONTAINMENT STRUCTURE DECONTAMINATION

In accordance with the Plan, the joints and dike cracks identified during the initial inspection were filled with an epoxy sealant. This precludes migration through the cracks/gaps during subsequent interior surface decontamination. In addition, given the difficulty of determining the through-going potential of the random cracks, all cracks were routed and sealed prior to surface decontamination. Once the sealant set, surface decontamination per the Plan requirements was initiated.

The surface was swept of all loose debris and with a fine mesh aggregate. A steam cleaner was then used (with the same source water as was used for the other two unit closures) on the entire containment system interior surface. This included the dike walls, pump pads and equipment supports. Upon visual verification that steam cleaning was complete, the area was triple rinse with source water. A rinse water sample was collected, handled and analyzed in accordance with Section 3.6 of the Plan.

2.3 CRACKS/GAPS INVESTIGATIONS

The Plan presents detailed steps to be followed in evaluating the cracks and gaps. Based on the Plan (as per the approved Closure Plan Amendments, per VDEQ letter dated March 8, 2000), one sample was taken for each 10 feet of a large crack/gap and one sample was taken every 15 feet of construction joint. The actual location of these sample points is as presented in Figure 3. A copy of this figure is included as Attachment B. The containment area is essentially flat, allowing following liquid from precipitation or a spill to pond. Therefore, it was decided that the locations "...where contamination is most likely to have migrated (i.e., low spots...)" were throughout the pad. Concrete was chipped at all locations shown on Figure 3, including the random cracks and joints.

At each sample point, concrete was chipped three inches on either side of the crack or joint. A hammer drill was used to loosen the surface concrete, exposing concrete at a depth of approximately two inches. Samples of concrete were collected from each point and submitted to the laboratory for analyses. For each crack, the chipped hole was brushed clean and an evaluation was made as to whether the crack had penetrated the pad. Once a crack was determined to have penetrated, a four-inch diameter diamond-tipped corer was utilized to penetrate the entire concrete thickness. This facilitated the collection of a soil sample from the underlying soil.

When the dike walls were inspected, cracks within six inches of the containment system floor and that propagated the entire wall thickness were noted. At each of these points, adjacent soil on the outside of the wall was sampled in a two-foot radius around the apparent possible pathways of any release. Soil within this area was collected at a depth of six inches.

3.0 RESULTS OF INVESTIGATIONS

This section presents the results of the investigations described in Section 2 of this document. A summary of analytical and QA/QC results are included. Two distinct efforts were conducted. One to verify that the secondary containment structure had been decontaminated in accordance with the Plan and the other to evaluate the concrete itself and the underlying soil for constituents of concern.

3.1 SECONDARY CONTAINMENT STRUCTURE DECONTAMINATION SAMPLES

Following steam cleaning of the entire containment structure, rinsate samples were collected and analyzed in accordance with the Plan. Rinsate consisted of adequate water to ensure that all surfaces of the containment area and dike were contacted.

As is then required by Section 4.1 of the Plan, the results of the analyses were compared directly with the Practical Quantitation Limits (PQLs) established in Table I-1 of the Plan (discussed in detail in Section 4.0). It should be noted that, following the first cleaning of the containment area, the rinsate sample results indicated an exceedance of the lead PQL. As allowed by the Plan, the area was cleaned a second time and re-sampled.

3.2 CRACK/GAP INVESTIGATION SAMPLES

Soil and concrete sampling was conducted in accordance with EPA requirements, as detailed in SW-846, and the Virginia DEQ Closure Plan. Sample locations were determined in accordance with the requirements of Section 3.4 of the Closure Plan and are identified on Figure 3.

Four borings (SB#1 through SB#4) were advanced at the perimeter of the containment system dike wall at the location of cracks that were identified as penetrating the dike wall. Samples were collected at a depth of six inches below the ground surface (bgs).

Seven borings (SB#5 through SB#11) were advanced at expansion joints. Soil samples were collected at six inches bgs (identified as SB#X-A,B) and at twelve inches bgs (identified as SB#X-C,D).

Six borings (C#1 through C#6) were advanced at cracks in the concrete floor. Two borings (C#1 and C#2) were terminated when it was determined the cracks did not breach the concrete floor.

Six concrete samples were collected (C#1 through C#6). Soil samples were collected at the four crack locations that breached the concrete floor (CC#3 through CC#6) at six and twelve inches bgs (respectively identified as SB#X-A,B and SB#X-C,D).

3.3 SUMMARY OF FINDINGS

The source and rinsate water, soil, and concrete samples were analyzed for benzene (EPA Method 5030/8021) and lead (EPA Method 6020). The results of the source and rinsate water analyses are

presented in Table 1. The results of the laboratory analysis of the soil and concrete samples are summarized in Table 2 and Table 3.

The analytical laboratory reports for the sample are included in Attachment A. This includes the results of trip blank samples.

TABLE 1
SUMMARY OF FINDINGS

Containment Surface Rinsate Water

Sample ID	Benzene (µg/L)	Lead (µg/L)
Source Water Sample	<0.1	<0.2
Floor/Closure Rinsate	<0.1	0.5

Notes: µg/L = microgram/liter

TABLE 2
SUMMARY OF FINDINGS

Crack Investigation Samples:
Concrete and Underlying Soil

Sample ID	Benzene (µg/kg)	Lead (µg/kg)	Lead (mg/kg)
C#1-A,B	<2.0	7,800	7.8
C#2-A,B	<2.0	1,700	1.7
C#3-A,B	<2.0	3,200	3.2
C#4-A,B	<2.0	2,400	2.4
C#5-A,B	<2.0	8,800	8.8
C#6-A,B	<2.0	2,600	2.6
CC#3-A,B	<2.0	6,000	6.0
CC#3-C,D	<2.0	14,000	14.0
CC#4-A,B	<2.0	14,700	14.7
CC#4-C,D	<2.0	9,900	9.9
CC#5-A,B	<2.0	8,700	8.7
CC#5-C,D	<2.0	6,500	6.5
CC#6-A,B	<2.0	8,700	8.7
CC#6-C,D	<2.0	3,300	3.3

Notes: µg/kg = microgram/kilogram (ppb)
mg/kg = milligram/kilogram (ppm)
C# = Concrete Sample
CC# = Underlying Soil Sample
A,B = six inches bgs
C,D = twelve inches bgs

TABLE 3
SUMMARY OF FINDINGS

Joint Investigation Samples: Underlying Soil

Sample ID	Benzene (µg/kg)	Lead (µg/kg)	Lead (mg/kg)
SB#1-A,B	<2.0	9,500	9.5
SB#2-A,B	<2.0	11,800	11.8
SB#3-A,B	<2.0	8,400	8.4
SB#4-A,B	<2.0	29,100	29.1
SB#5-A,B	<2.0	11,100	11.1
SB#5-C,D	2.0	12,300	12.3
SB#6-A,B	<2.0	7,100	7.1
SB#6-C,D	<2.0	5,600	5.6
SB#7-A,B	<2.0	5,900	5.9
SB#7-C,D	<2.0	7,100	7.1
SB#8-A,B	2.0	11,900	11.9
SB#8-C,D	<2.0	4,700	4.7
SB#9-A,B	<2.0	10,200	10.2
SB#9-C,D	<2.0	8,500	8.5
SB#10-A,B	<2.0	11,600	11.6
SB#10-C,D	<2.0	35,000	35.0
SB#11-A,B	<2.0	7,800	7.8
SB#11-C,D	<2.0	200,000	200.0

Notes: µg/kg = microgram/kilogram (ppb)
mg/kg = milligram/kilogram (ppm)
SB = soil boring
A,B = six inches bgs
C,D = twelve inches bgs

3.4 SUMMARY OF QA/OC FINDINGS

For the source water samples, a trip blank was analyzed along with the samples. Concentrations of hazardous constituents of concern (HCOCs) were less than the requisite PQLs. The laboratory QA for benzene indicated a MS recovery of 86% with 1% RPD, and for lead, the laboratory QA indicated a MS/MSD recovery of 104%.

For the soil and concrete analyses, the benzene MS recovery range was 84.6 to 98% with 0% RPD, and the lead MS/MSD recovery range was 88% to 93% with a 1.3% RPD.

4.0 CLOSURE ASSESSMENT

Given the information presented in Sections 1 through 3 of this report, URS conducted an initial risk screening for closure of the secondary containment system. The hazardous constituents of concern (HCOCs) and their respective practical quantitation limits (PQLs) as stated in the Closure Plan are listed in Table 4.

TABLE 4
PRACTICAL QUANTITATION LIMITS

Hazardous Constituents of Concern

HCOC	Water PQL (µg /L)	Soil PQL (µg/kg)
Benzene	1	10
Lead	2	20

Note: µg/L = microgram/liter
µg/kg = microgram/kilogram

A comparison of the results presented in Table 1 with the PQLs in Table 4 indicates that the secondary containment structure was successfully decontaminated in accordance with closure standards in the Plan. Given these results, the rinsate water was disposed of in the on-site wastewater treatment system.

Relative to benzene, a comparison of the results of the laboratory analysis of the samples presented in Table 2 and 3 with the PQLs in Table 4 indicates that none of the detected benzene levels in the soil samples exceed the established PQL for the subject site. Therefore, satisfactory decontamination has been achieved for the HCOC benzene.

The same comparison was conducted for lead. The detected lead levels in the soil samples indicate exceedance of the lead PQL for each sample. Therefore, given the low lead levels found in the samples, it was appropriate that a risk screening be conducted.

In this case, a risk screening is an examination of the exposure pathways and potential receptors and determination of applicable published federal and state data relative to action levels for lead in soil. Following the screening, the necessity of a full risk assessment, as well as the need for a statistical analysis and comparison of the data with background levels, will be determined.

4.1 EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

The property is located in the Forbes Industrial Park within a lightly developed area. Wooded and grassy areas exist on three sides of the property and other industrial activities are located across the access road. Topography at the area exhibits a slight fall across the site from southeast to northwest with the drainage flow regime being sheet flow. Based on record research, groundwater occurs at a minimum of 10 feet

URS

Dames & Moore

August 25, 2000

Ms. Debra Miller
Virginia Department of Environmental Quality
629 East Main Street
Richmond, Virginia 23219

Re: Modified Report Page
Final Closure Report and Certification
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, Virginia
EPA ID Number: VAD 988 175 055
URS/D&M Job No. 30898-005-155

Dear Ms. Miller:

On behalf of Clean Harbors Environmental Services, Inc., attached is the modification to page 8 of the Final Closure Report and Certification report for the referenced project as we discussed. It is understood that you will attach this page as a replacement to original report for the benefit of subsequent VDEQ reviewers.

Your assistance by suggesting changes that will allow for a more streamlined review of this document is much appreciated.

Please contact me with any questions at (804) 474-5416, or Mr. Peter Egan, Clean Harbors, at (781) 849-1800 x 1278.

Sincerely,

URS CORPORATION

Robert J. Shaffer, P.E.
Project Manager

RJS:mms
Enclosure

cc: Mr. Peter Egan, Clean Harbors

URS Corporation
5540 Falmouth Street, Suite 201
Richmond, VA 23230
Tel: 804.965.9000
Fax: 804.965.9764

revised version

below grade at the facility. All process activities, including the subject secondary containment structure, are located inside a security fence that includes warning signage. Access to the facility operations is limited and controlled. Four full time employees work within the operations area and five administrative employees work in office trailers adjacent to the fenced facility.

As described in Section 2 of this report, the subject secondary containment structure consists of a reinforced concrete pad with concrete/block dike walls. The soil from which all the soil samples were taken is overlain with the concrete pad.

The site is an industrial operation. However, relative to the identification of receptors and pathways for initial risk screening purposes, a residential exposure scenario is examined. This would allow the facility to pursue an unrestricted clean closure. Likely potential environmental receptors would include animal entry, surface water and groundwater. Future potential human receptors include a hypothetical construction worker involved with demolition of the concrete containment structure.

Considering that the subject soil is overlain (or "capped") by the concrete pad, and that access to the area is controlled by fencing and signage, the existing pathways to both human and environmental receptors are incomplete. The fencing, as well as the concrete, precludes the direct contact by human receptors and animals. The concrete precludes contact of the soil by sheet flow water, and transport via percolation to the groundwater.

A potential pathway may exist when considering the future construction worker scenario, however, as seen in Section 4.2 of this report, soil concentrations are at levels protective of this receptor for inplace soils.

4.2 COMPARISON WITH PUBLISHED DATA

Based on research, an U.S. Environmental Protection Agency (EPA) directive entitled "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities." (U.S. EPA 1994) was found. This directive provides recommendations for a streamlined approach for determining a threshold lead level that is protective at CERCLA and RCRA sites.

According to the Directive, the U.S. EPA applied the Integrated Exposure Uptake Biokinetic Model (IEUBK) to default parameters to develop residential screening levels that may be used to determine if further study is not required at a site. Screening levels are defined as "a level of contamination above which there may be concern to warrant site-specific study of risks."

The parameters applied to the IEUBK model were chosen to limit the estimated risk of exceeding ten micrograms of lead per decileter of blood (10 μg/dL) to no more than 5% of a group of typical, exposed children. The 10 μg/Dl blood lead level is drawn from U.S. EPA and Centers for Disease Control analyses that associates higher levels with health effects in children. Children in a residential setting were specifically evaluated using the IEUBK model because they are more sensitive to the effects of lead and a screening level developed for children should be protective of older populations.

below grade at the facility. All process activities, including the subject secondary containment structure, are located inside a security fence that includes warning signage. Access to the facility operations is limited and controlled. Four full time employees work within the operations area and five administrative employees work in office trailers adjacent to the fenced facility.

As described in Section 2 of this report, the subject secondary containment structure consists of a reinforced concrete pad with concrete/block dike walls. The soil from which all the soil samples were taken is overlain with the concrete pad.

The following receptors and pathways were identified during the initial risk screening. Given that the site is an industrial operation, existing potential human receptors would include workers, visitors, and trespassers. Potential environmental receptors would include animal entry, surface water and groundwater. Future potential human receptors include a hypothetical construction worker involved with demolition of the concrete containment structure.

Given that the subject soil is overlain (or "capped") by the concrete pad, and that access to the area is controlled by fencing and signage, the existing pathways to both human and environmental receptors are incomplete. The fencing, as well as the concrete, precludes the direct contact by human receptors and animals. The concrete precludes contact of the soil by sheet flow water, and transport via percolation to the groundwater.

A potential pathway may exist when screening the future construction worker scenario, however, as seen in Section 4.2 of this report, soil concentrations are at levels protective of this receptor for inplace soils.

4.2 COMPARISON WITH PUBLISHED DATA

Based on research, an U.S. Environmental Protection Agency (EPA) directive entitled "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities." (U.S. EPA 1994) was found. This directive provides recommendations for a streamlined approach for determining a threshold lead level that is protective at CERCLA and RCRA sites.

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The parameters applied to the IEUBK model were chosen to limit the estimated risk of exceeding ten micrograms of lead per decileter of blood (10 μg/dL) to no more than 5% of a group of typical, exposed children. The 10 μg/Dl blood lead level is drawn from U.S. EPA and Centers for Disease Control analyses that associates higher levels with health effects in children. Children in a residential setting were specifically evaluated using the IEUBK model because they are more sensitive to the effects of lead and a screening level developed for children should be protective of older populations.

Based on the IEUBK modeling and U.S. EPA experience, the Directive recommended a residential screening level of 400 parts per million for lead in soil, noting that "residential areas with soil lead below 400 ppm generally require no further action." The Directive does qualify the recommendation, advising that some areas, including agricultural areas, wetlands, areas with ecological risk, and areas of higher than expected human exposure, would require additional study. As described in Section 4.1 of this report, an overview of this site indicates that none of these scenarios are applicable.

Further, Appendix A-1 of the Directive provides a "Suggested Decision Logic for Residential Scenarios for CERCLA and RCRA Corrective Action". The first step of the decision logic guidance indicated that if the soil lead concentration is less than 400 ppm, no further action is required.

At this site, the detected levels of lead were generally in the range of 6 to 35 ppm. The highest detected level of lead (SB#11-C,D) was 200 ppm, which is half the Directive's screening level for warranted further action. In addition, as discussed in Section 4.1 of this report, the exposure pathways and potential receptors are limited given the soil's containment by the concrete pad.

4.3 CONCLUSION

Based on evaluation of exposure pathways and potential receptors and the comparison of the HCOC levels with the current EPA guidance, the HCOCs at the subject site do not pose an unacceptable level of risk to human health and the environment. Clean closure of the concrete secondary containment has been achieved.

CHESI's current plans for the secondary containment system involve its use for secondary containment of non-hazardous waste, though future use of the subject site may involve the demolition of the containment system. In this event, URS recommends evaluation of current available published data for risk for lead in soils.

5.0 CLOSURE CERTIFICATION

Facility:

Clean Harbors Environmental Services, Inc.

7515 Harvest Road

Prince George, Virginia

EPA ID Number VAD 988 175 055

Certification:

The Secondary Containment System has been closed in accordance with the approved Closure Plan, dated September 1999, as described in the Partial Closure Plan, dated June 2000.

Owner or Operator:

Signature: Eugene A. Cookson, Jr.

Printed Name: Eugene A. Cookson, Jr.

Title: Senior Vice President

Company: Clean Harbors Environmental Services, Inc.

Date: 7/5/00

Independent Registered Professional Engineer:

Signature: Robert J. Shaffer

Printed Name: Robert J. Shaffer, P.E.

Registration Number: 0402 023609

Company: URS Dames & Moore

Date: 6/28/00

COMMONWEALTH OF VIRGINIA
ROBERT J. SHAFFER
NO. 023609
PROFESSIONAL ENGINEER

REFERENCES

U.S. EPA Office of Solid Waste and Emergency Response. "Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities." Directive 9355.4-12. August 1994.

FIGURES

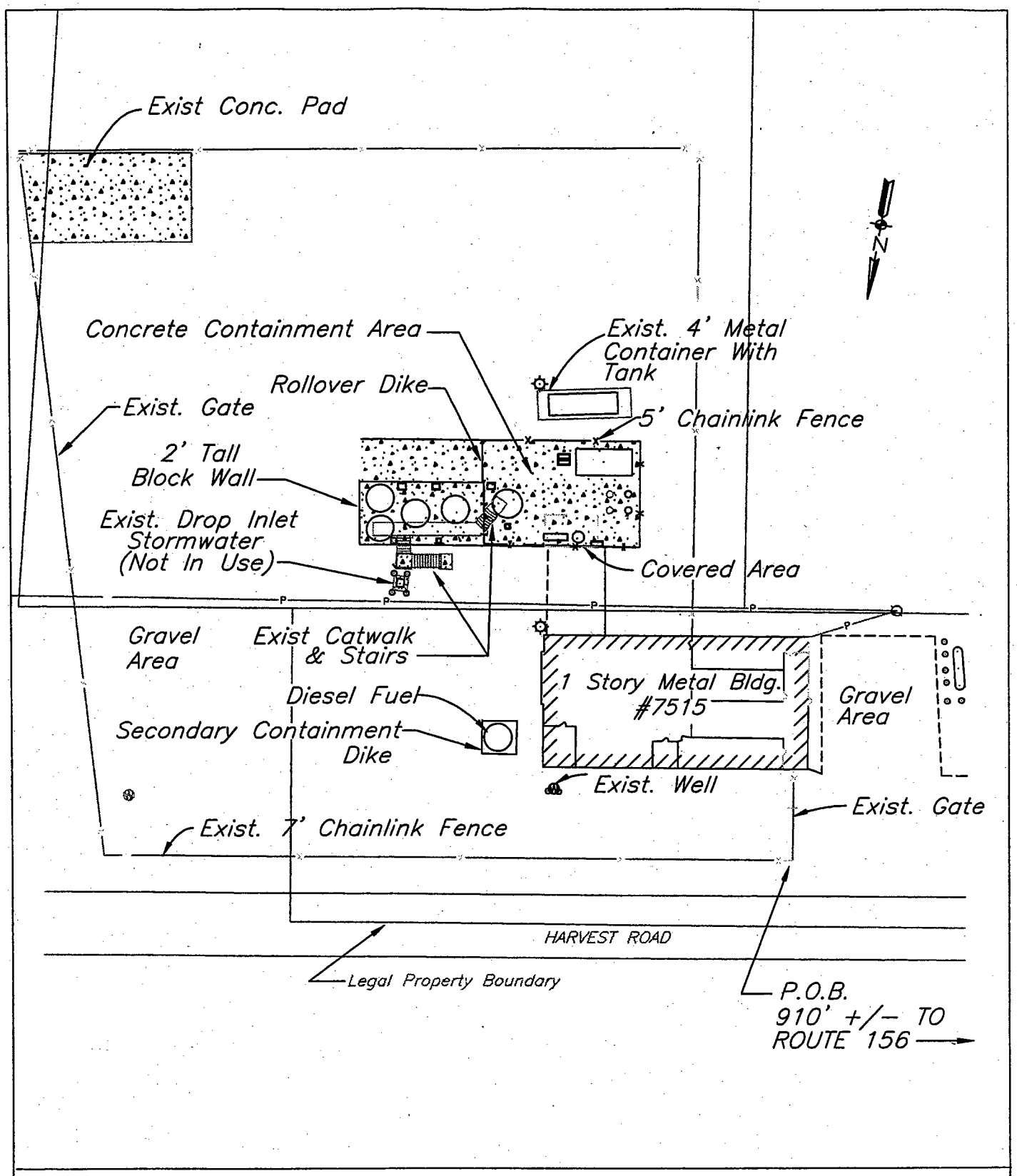


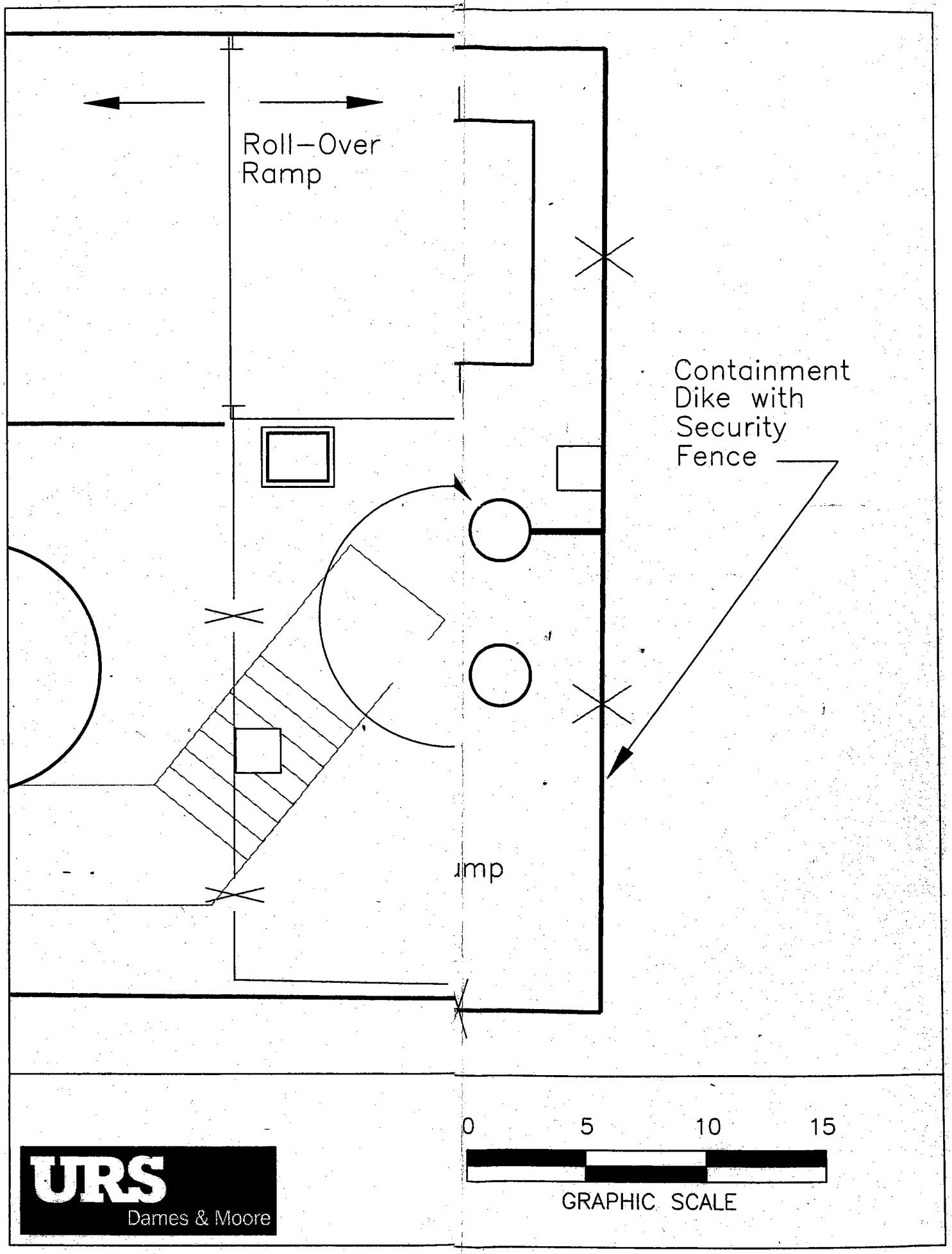
FIGURE 1

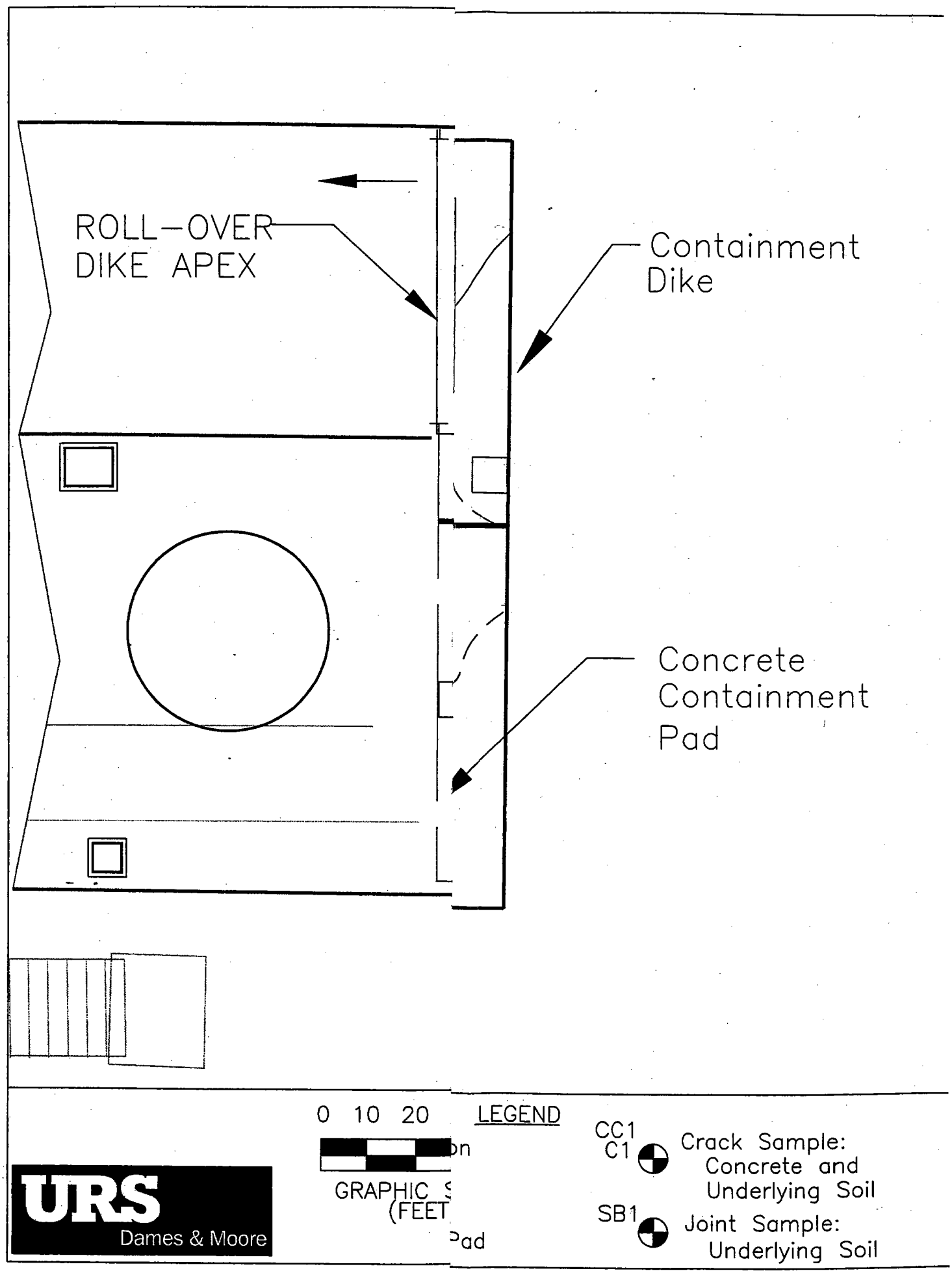
SITE LAYOUT
HWMU CLOSURE REPORT

CLEAN HARBORS, INC.
PRINCE GEORGE, VIRGINIA

URS
Dames & Moore

0 20 40 80
GRAPHIC SCALE


Roll–Over
Ramp
Containment
Dike with
Security
Fence
ımp
0
5
10
15
GRAPHIC SCALE
URS
Dames & Moore


ROLL-OVER
DIKE APEX
Containment
Dike
Concrete
Containment
Pad
0 10 20
GRAPHIC S
(FEET
LEGEND
CC1
C1
Crack Sample:
Concrete and
Underlying Soil
SB1
Joint Sample:
Underlying Soil
URS
Dames & Moore

ATTACHMENT A

LABORATORY ANALYSIS RESULTS

Primary Laboratories, Inc.

2087 Dabney Road • Richmond, VA 23230 • Telephone (804) 213-0831 • Fax (804) 213-0842

ANALYTICAL LABORATORY REPORT

Clean Harbors
Attn: Lance Wolfe
7515 Harvest Road
Prince George, Virginia 23875

23-Mar-00

Date Received: 10-Mar-00
Project: Closure
Date Sampled: 08-Mar-00
Work Order No: 0003076-01
Client ID: **Trip Blank**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Total Lead	1.0	0.2	ug/L	6020	22-Mar-00	SC*

Date Sampled: 10-Mar-00
Work Order No: 0003076-02
Client ID: **Background**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Total Lead	0.5	0.2	ug/L	6020	22-Mar-00	SC*

Primary Laboratories, Inc.
Results

23-Mar-00

Date Sampled: 10-Mar-00
Work Order No: 0003076-03
Client ID: **Floor/Closure**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Total Lead	<0.2	0.2	ug/L	6020	22-Mar-00	SC*

Total Lead Matrix spike was performed at 100 ug/L.
Total Lead % recoveries were 104% for the MS/MSD.

* Analysis sub-contracted.

Signature: _____ Date: 3-23-00
Parry L. Bragg
Laboratory Manager

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: Clean Harbors
ATTN: Lance Wolfe
STREET: 7311 Harvest
CITY: Prince George
PHONE: FAX:

CONSULTANT:
ATTN:
STREET:
CITY:
PHONE: FAX:

PROJECT: Closure

INVOICE TO:

P.O. #:

SAMPLED BY:

PRESERVATIVE: HNO3

SAMPLE IDENTIFICATION	SAMPLING: COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	MATRIX: WATER	SOIL	OTHER	Primary Lab No. (LAB USE ONLY)	ANALYSES: Total Lead 6020	COMMENTS
Trip BLANK		X	3-8-00		1	X			0003076-01	X	Rush
Background		X	3-10-00		1	X			-02	X	
Floor/closure		X	3-10-00		1	X			-03	X	

RELINQUISHED BY SAMPLER:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
Lance Wolfe	3-10-00	10:4 AM	[signature]	3/10/00	10:45
RELINQUISHED BY: [signature] BEX	3/10/00	12:00	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY LAB: [signature]	3/10/00	1300

TEMP: PRESERVATIVE ICE

TAT:
- ○ 24 HRS / /
- ○ 48 HRS / /
- ○ 72 HRS / /
- ○ 5 DAYS / /
- ○ 10 DAYS / /
- ○ OTHER 03/20/00

CHAIN OF CUSTODY #: ____ OF ____

Primary Laboratories, Inc.

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RECEIVED
MAR 09 2000
VIRGINIA S/C

ANALYTICAL LABORATORY REPORT

Clean Harbors
Attn: Lance Wolfe
7515 Harvest Road
Prince George, Virginia 23875

02-Mar-00

Date Received: 22-Feb-00
Date Sampled: 21-Feb-00
Work Order No: 0002138-01
Client ID: **Floor/Closure**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<1.0	1.0	ug/L	5030/8021	25-Feb-00	SC*
Total Lead	3.7	0.2	ug/L	6020	29-Feb-00	SC*

Primary Laboratories, Inc.
Results

02-Mar-00

Date Sampled: 21-Feb-00
Work Order No: 0002138-02
Client ID: **Trip Blanks**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<1.0	1.0	ug/L	5030/8021	25-Feb-00	SC*
Total Lead	<0.2	0.2	ug/L	6020	29-Feb-00	SC*

Total Lead Matrix spike was performed at 100 ug/L.
Total Lead % recoveries were 99% and 96% for the MS/MSD. % RPD = 3.1%

Benzene Spike Recovery = 86%
Sample analyzed in duplicate.
Benzene RPD = 1%

Signature: Parry L. Bragg Date: 3/2/00
Parry L. Bragg
Laboratory Manager

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: Clean Harbors
ATTN: Lance Wolfe
STREET: 7th Harvest
CITY: Prince George
PHONE: 452-1800 FAX: 452-1700

CONSULTANT:
ATTN:
STREET:
CITY:
PHONE: FAX:

PROJECT: Closure

INVOICE TO:

P.O. #:

SAMPLED BY:

PRESERVATIVE: HCL, HNO3

SAMPLE IDENTIFICATION	SAMPLING: COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	MATRIX: WATER	SOIL	OTHER	Primary Lab No. (LAB USE ONLY)	ANALYSES: Pstex 8021B	Total Lead 6020	COMMENTS
Floor / closure		X	2-21-00	1pm	4	X			0062138-01	X	X	Normal TAT
Trip blanks		X			2	X			-02	X	X	

RELINQUISHED BY SAMPLER:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
Lance Wolfe	2-21-00	4:50	[signature]	2-21-00	4:50
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY LAB:	DATE:	TIME:
[signature] BEX	2-21-00	6:45	[signature]	2/22/00	0730

TEMP:

PRESERVATIVE: ICE

TAT:
- ○ 24 HRS / /
- ○ 48 HRS / /
- ○ 72 HRS / /
- ○ 5 DAYS / /
- ○ 10 DAYS / /
- ○ OTHER 03 106 100

CHAIN OF CUSTODY #: ____ OF ____

Primary Laboratories, Inc.

2087 Dabney Road • Richmond, VA 23230 • Telephone (804) 213-0831 • Fax (804) 213-0842

RECEIVED
FEB 22 2000
VIRGINIA S/C

ANALYTICAL LABORATORY REPORT

Clean Harbors
Attn: Lance Wolfe
7515 Harvest Road
Prince George, Virginia 23875

15-Feb-00

Project: Closure
Date Received: 17-Jan-00
Date Sampled: 17-Jan-00
Work Order No: 0001095-01
Client ID: **Well/Background/Closure**

Test Description	Final Result	PQL	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Total Lead	1.0	0.2	ug/L	6020	25-Jan-00	SC*

Date Sampled: 17-Jan-00
Work Order No: 0001095-02
Client ID: **Trip Blank**

Test Description	Final Result	PQL	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Total Lead	<0.2	0.2	ug/L	6020	25-Jan-00	SC*

Date Sampled: 07-Feb-00
Work Order No: 0002045-01
Client ID: **Well/Background/Closure**

Test Description	Final Result	PQL	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<1.0	1.0	ug/L	5030/8021	08-Feb-00	SC*

Primary Laboratories, Inc.
Results

15-Feb-00

Date Sampled: 07-Feb-00
Work Order No: 0002045-02
Client ID: **Trip Blank**

Test Description	Final Result	PQL	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<1.0	1.0	ug/L	5030/8021	08-Feb-00	SC*

* Analysis sub-contracted.

Total Lead Matrix spike was performed at 0.100 mg/L
Total Lead % recoveries were 106% and 98% for the MS/MSD. % RPD = 7.8

Benzene Spike Recovery = 90%
Benzene Duplicate Spike Recovery = 91%
Benzene RPD = 1%

Signature: Parry L. Bragg Date: 2/15/00
Parry L. Bragg
Laboratory Manager

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: Clean Harbors
ATTN: Lonnie Wolfe
STREET: Prince George
CITY: 7315 Harvest
PHONE: 452-4800 FAX: 452-1710

CONSULTANT:
ATTN:
STREET:
CITY:
PHONE: FAX:

PROJECT: Closure

INVOICE TO:

P.O. #:

SAMPLED BY:

PRESERVATIVE: HCL

SAMPLE IDENTIFICATION	COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	WATER	SOIL	OTHER	Primary Lab No. (LAB USE ONLY)	BTEX 8021B	COMMENTS
well / background / closure		X	2-7-00	11AM	5	X			0002045	X	Normal TAT
TRIP BLANK		X								X	

RELINQUISHED BY SAMPLER: DATE: TIME:
RECEIVED BY: Wayland DATE: 2-7-00 TIME: 1232P

RELINQUISHED BY: Wayland DATE: 2-7-00 TIME: 1257
RECEIVED BY: DATE: 2/7/00 TIME: 13:25

RELINQUISHED BY: DATE: 2/7/00 TIME: 1:25 pm
RECEIVED BY LAB: DATE: 2/7/00 TIME: 1330

TEMP: 3.2°C PRESERVATIVE ICE Rec'd w/ coc seal

TAT:
- 24 HRS / /
- 48 HRS / /
- 72 HRS / /
- 5 DAYS / /
- 10 DAYS / /
- OTHER / /

CHAIN OF CUSTODY #: 1 OF

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: Clean Harbors
ATTN: Lance Wolfe
STREET: 2[illegible] Harvest Rd
CITY: Prince George
PHONE: 457-1800 FAX: 458-1700

CONSULTANT:
ATTN:
STREET: *
CITY:
PHONE: FAX:

PROJECT: Closure

INVOICE TO:

P.O. #:

SAMPLED BY:

PRESERVATIVE: HCL, HNO3

SAMPLE IDENTIFICATION	SAMPLING: COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	MATRIX: WATER	SOIL	OTHER	Primary Lab No. (LAB USE ONLY)	ANALYSES: Btex 8021B	Total Lead 6020	COMMENTS
well/background/closure		X	1-17-00	9:45am	4	X			0001095-01	X	X	Normal
Trip Blank		X			4	X			-02	*	X	TAT

RELINQUISHED BY SAMPLER: Lance Wolfe DATE: 1-17-00 TIME: 2:55pm
RECEIVED BY: * Venece Jecki DATE: 1-17-00 TIME: 2:55
RELINQUISHED BY: DATE: TIME:
RECEIVED BY: DATE: TIME:
RELINQUISHED BY: Venece Jecki DATE: 1/17 TIME: 1620
RECEIVED BY LAB: [illegible] DATE: 1/17/00 TIME: 1620

TAT: 1 / 1 / 24 HRS / / ; 48 HRS / / ; 72 HRS / / ; 5 DAYS 01/24/00 ; 10 DAYS / / ; OTHER / /

TEMP: Temp Blank 1.9°C
PRESERVATIVE: ICE
COC seal intact

CHAIN OF CUSTODY #: ____ OF ____

Primary Laboratories, Inc.

2087 Dabney Road • Richmond, VA 23230 • Telephone (804) 213-0831 • Fax (804) 213-0842

ANALYTICAL LABORATORY REPORT

Clean Harbors
Attn: Lance Wolfe
7515 Harvest Road
Prince George, Virginia 23875

26-Apr-00

Date Received: 03-Apr-00
Date Sampled: 31-Mar-00
Work Order No: 0004003-01
Client ID: **C#1 A&B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	7,800	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 31-Mar-00
Work Order No: 0004003-02
Client ID: **C#2 A&B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	1,700	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 31-Mar-00
Work Order No: 0004003-03
Client ID: **C#3 A&B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	3,200	20	ug/Kg	6020	19-Apr-00	SC*

Primary Laboratories, Inc.
Results

26-Apr-00

Date Sampled: 31-Mar-00
Work Order No: 0004003-04
Client ID: **C#4 A&B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	2,400	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 31-Mar-00
Work Order No: 0004003-05
Client ID: **C#5 A&B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	8,800	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 31-Mar-00
Work Order No: 0004003-06
Client ID: **C#6 A&B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	2,600	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 03-Apr-00
Work Order No: 0004003-07
Client ID: **SB #1 A &B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	9,500	20	ug/Kg	6020	19-Apr-00	SC*

Primary Laboratories, Inc.
Results

26-Apr-00

Date Sampled: 03-Apr-00
Work Order No: 0004003-08
Client ID: **SB #2 A &B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	11,800	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 03-Apr-00
Work Order No: 0004003-09
Client ID: **SB #3 A &B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	8,400	20	ug/Kg	6020	19-Apr-00	SC*

Date Sampled: 03-Apr-00
Work Order No: 0004003-10
Client ID: **SB #4 A &B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	06-Apr-00	SH
Lead	29,100	20	ug/Kg	6020	19-Apr-00	SC*

MS/MSD recoveries of 90.0 and 88.8% respectively, and a % RPD of 1.3% for Lead
Benzene = 98%; Toluene = 103%; Ethylbenzene = 98%; Total Xylenes = 105%

Signature: _____ Date: 5/1/00
Parry L. Bragg
Laboratory Manager

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PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: Clean Harbors
ATTN: Gary Young
STREET: 7515 Harvest Rd.
CITY: Prince George, Va.
PHONE: 452-1800 FAX: 452-1700

CONSULTANT:
ATTN:
STREET:
CITY:
PHONE: FAX:

PROJECT: Closure Part 2

INVOICE TO:

P.O. #:

SAMPLED BY: GKY

PRESERVATIVE

SAMPLE IDENTIFICATION	SAMPLING: COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	MATRIX: WATER	SOIL	OTHER Concrete	Primary Lab No. (LAB USE ONLY)	ANALYSES: SW 846 Lead 6020	SW 846 Benzene 8021B	COMMENTS
												SW-846 Method Lead 6020 Benzene 8021B
C #1 A+B		X	3-31	4pm				X	0004003-1	X	X	
C #2 A+B		X	3-31	4pm				X	-2	X	X	
C #3 A+B		X	3-31	4pm				X	-3	X	X	
C #4 A+B		X	3-31	4pm				X	-4	X	X	
C #5 A+B		X	3-31	4pm				X	-5	X	X	
C #6 A+B		X	3-31	4pm				X	-6	X	X	
SB #1 A+B		X	4-3	1pm			X		-7	X	X	
SB #2 A+B		X	4-3	1pm			X		-8	X	X	
SB #3 A+B		X	4-3	1pm			X		-9	X	X	
SB #4 A+B		X	4-3	1pm			X		-10	X	X	

RELINQUISHED BY SAMPLER:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	4-3-00	4:10	[signature]	4-3-00	4:10 P
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
RELINQUISHED BY: [signature]	DATE: 4-3-00	TIME: 4:56	RECEIVED BY LAB: [signature]	DATE: 4-3-00	TIME: 16:56

TEMP: PRESERVATIVE: Rec'd on ICE

TAT:
- ○ 24 HRS / /
- ○ 48 HRS / /
- ○ 72 HRS / /
- ○ 5 DAYS / /
- ○ 10 DAYS / /
- ○ OTHER / /

2 weeks.

CHAIN OF CUSTODY #: 1 OF 1

4-10

Primary Laboratories, Inc.

2087 Dabney Road • Richmond, VA 23230 • Telephone (804) 213-0831 • Fax (804) 213-0842

ANALYTICAL LABORATORY REPORT

Clean Harbors
Attn: Lance Wolfe
7515 Harvest Road
Prince George, Virginia 23875

01-May-00

Date Received: 12-Apr-00
Date Sampled: 11-Apr-00
Work Order No: 0004058-01
Client ID: **SB# 5-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	11,100	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-02
Client ID: **SB# 5-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	12,300	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-03
Client ID: **SB #6-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	7,100	20	ug/Kg	6020	21-Apr-00	SC*

Primary Laboratories, Inc.
Results

01-May-00

Date Sampled: 11-Apr-00
Work Order No: 0004058-04
Client ID: **SB #6-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	5,600	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-05
Client ID: **SB #7-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	5,900	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-06
Client ID: **SB #7-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	7,100	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-07
Client ID: **SB #8-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	11,900	20	ug/Kg	6020	21-Apr-00	SC*

Primary Laboratories, Inc.
Results

01-May-00

Date Sampled: 11-Apr-00
Work Order No: 0004058-08
Client ID: **SB #8-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	4,700	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-09
Client ID: **SB #9-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	10,200	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-10
Client ID: **SB #9-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	8,500	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-11
Client ID: **SB #10-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	11,600	20	ug/Kg	6020	26-Apr-00	SC*

Primary Laboratories, Inc.
Results

01-May-00

Date Sampled: 11-Apr-00
Work Order No: 0004058-12
Client ID: **SB #10-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	35,000	20	ug/Kg	6020	26-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-13
Client ID: **SB #11-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	7,800	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-14
Client ID: **SB #11-C,D**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	200,000	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-15
Client ID: **CC#3-A,B**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	6,000	20	ug/Kg	6020	26-Apr-00	SC*

Primary Laboratories, Inc.
Results

01-May-00

Date Sampled: 11-Apr-00
Work Order No: 0004058-16
Client ID: CC#3-C,D

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	14,000	20	ug/Kg	6020	26-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-17
Client ID: CC#4-A,B

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	14,700	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-18
Client ID: CC#4-C,D

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	9,900	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-19
Client ID: CC#5-A,B

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	8,700	20	ug/Kg	6020	21-Apr-00	SC*

Primary Laboratories, Inc.
Results

01-May-00

Date Sampled: 11-Apr-00
Work Order No: 0004058-20
Client ID: CC#5-C,D

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	6,500	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-21
Client ID: CC#6-A,B

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	8,700	20	ug/Kg	6020	21-Apr-00	SC*

Date Sampled: 11-Apr-00
Work Order No: 0004058-22
Client ID: CC#6-C,D

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Tech. Initials
Benzene	<2.0	2.0	ug/Kg	5030/8021	14-Apr-00	SH
Lead	3,300	20	ug/Kg	6020	21-Apr-00	SC*

MS/MSD recoveries = 95.5% and 97.8% with a % RPD of 2,4%.
93.0% and 91,8% with a RPD of 1.3% for Lead
Benzene = MS recovery 84.6%m % RPD of 0.0%

Signature: Parry L. Bragg Date: 5/3/00
Parry L. Bragg
Laboratory Manager

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: CLEAN HARBORS
ATTN: GARY YOUNG
STREET: 7515 Harvest Rd
CITY: Prince George
PHONE: 452-1800 FAX: 452-1700

CONSULTANT:
ATTN:
STREET:
CITY:
PHONE: FAX:

PROJECT: Closure Part 2

INVOICE TO:

P.O. #:

SAMPLED BY: GKY

PRESERVATIVE

SAMPLE IDENTIFICATION	SAMPLING: COMPOSITE	GRAB	DATE	TIME	NO. OF CONTAINERS	MATRIX: WATER	SOIL	OTHER	Primary Lab No. (LAB USE ONLY)	ANALYSES: SW 896 Lead 6020	SW 896 Benzene 8021B	COMMENTS
												SW-896 Method Lead 6020 Benzene 8021B
SB#5-A,B,C,D		X	4-11-00	1:30	4		X		0004058-01,02	X	X	
SB#6-A,B,C,D		X	4-11-00	1:30	4		X		03,04	X	X	
SB#7-A,B,C,D		X	4-11-00	1:30	4		X		05,06	X	X	
SB#8-A,B,C,D		X	4-11-00	1:30	4		X		07,08	X	X	
SB#9-A,B,C,D		X	4-11-00	1:30	4		X		09,10	X	X	
SB#10-A,B,C,D		X	4-11-00	1:30	4		X		11,12	X	X	
SB#11-A,B,C,D		X	4-11-00	1:30	4		X		13,14	X	X	
CC#3-A,B,C,D		X	4-11-00	3:30	4		X		15,16	X	X	
CC#4,A,B,C,D		X	4-11-00	3:30	4		X		17,18	X	X	
CC#5 A,B,C,D		X	4-11-00	3:30	4		X		19,20	X	X	

RELINQUISHED BY SAMPLER:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	4-12-00	9:19 AM	[signature]	4/12/00	9:48 AM
RELINQUISHED BY: [signature]	DATE: 4-12-00	TIME: 11:10	RECEIVED BY: [signature]	DATE: 4/12/00	TIME: 11:10
RELINQUISHED BY: [signature]	DATE: 4/12/00	TIME: 11:10	RECEIVED BY LAB: [signature]	DATE: 4/12/00	TIME: 1110

TAT: ○ 24 HRS / / ○ 48 HRS / / ○ 72 HRS / / ○ 5 DAYS / / ○ 10 DAYS / / ⊗ OTHER 04/26/00 2 weeks

TEMP: PRESERVATIVE ICE

CHAIN OF CUSTODY #: 1 OF 2

PRIMARY LABORATORIES CHAIN OF CUSTODY

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230
TEL: (804) 213-0831
FAX: (804) 213-0842

CLIENT: Clean Harbors
ATTN: Gary Young
STREET: 7515 Harvest Rd
CITY: Prince George
PHONE: 452-1700 FAX: 452-1700

CONSULTANT:
ATTN:
STREET:
CITY:
PHONE: FAX:

PROJECT: Cleaver Part 2

INVOICE TO:

P.O. #:

SAMPLED BY: GKY

SAMPLE IDENTIFICATION	SAMPLING: COMPOSITE	SAMPLING: GRAB	SAMPLING: DATE	SAMPLING: TIME	SAMPLING: NO. OF CONTAINERS	MATRIX: WATER	MATRIX: SOIL	MATRIX: OTHER	Primary Lab No. (LAB USE ONLY)	ANALYSES: SW 8910 Lead 6020	ANALYSES: SW 8916 Benzene 8021B	COMMENTS
CC # 6,A,B,C,D		X	1-11-00	3:30	4		X		0004058-21,22	X	X	SW 896 Method Lead 6020 Benzene 8021B

RELINQUISHED BY SAMPLER:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	4-12-00	9:49	[signature]	4-12	9:49
RELINQUISHED BY: [signature]	DATE: 4/12/00	TIME: 11:10	RECEIVED BY: [signature]	DATE: 4/12/00	TIME: 11:10
RELINQUISHED BY: [signature]	DATE: 4/12/00	TIME: 11:10	RECEIVED BY LAB: [signature]	DATE: 4/12/00	TIME: 1110

TEMP: PRESERVATIVE: ICE

TAT:
- ○ 24 HRS / /
- ○ 48 HRS / /
- ○ 72 HRS / /
- ○ 5 DAYS / /
- ○ 10 DAYS / /
- ○ OTHER 04/26/00

CHAIN OF CUSTODY #: 2 OF 2

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 859048 • BRAINTREE, MA 02185-9048
(781) 849-1800
Visit our Website at www.cleanharbors.com

Overnight Delivery – Federal Express

November 10, 2000

Ms. Debra Miller
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219

Re: Final Closure
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, Virginia
EPA ID Number: VAD 988 175 055

Dear Ms. Miller:

As a result of the recent closure approval inspection of the Prince George facility by the Virginia Department of Environmental Quality (VDEQ), a single issue was noted. One of the concrete sample locations deviated two feet from the closure report figure layout. In accordance with your request to Mr. Robert Shaffer of Dames & Moore, this is to explain why this was done.

The location as depicted by the report figure was proposed at the intersection of a "spoked" crack pattern in this section of pad. The primary intent of location selection was to allow for the sampling of soil below a potential migration path, such as a crack that was anticipated to have propagated through the entire pad thickness. Initially, it was predicted that the intersection of these cracks in this portion of the pad would be appropriate. However, upon further visual inspection, it was decided that the location where the concrete chipping actually occurred was the most likely potential migration path due to crack width. This location did not correspond with the intersection of the crack pattern "spoke" as depicted in the figure, but it was deemed to better meet the sampling program intent. Further, it was found that this portion of the crack did not propagate through the entire pad thickness, therefore there was confidence that the thinner, hairline cracks that made up the remainder of the "spoke" pattern did not propagate the pad thickness.

It should also be noted that the approved closure plan required that all cracks be sealed prior to pad surface cleaning. Given their hairline nature, the cracks required mechanical routing to provide a proper adhesion surface for the epoxy sealant. At the time the VDEQ inspector observed the cracks, they appeared significantly wider than their actual width.

Clean Harbors Environmental Services Inc. believes that the location of this point more fully met the intent of the approved closure plan, and in no way compromises the closure certification, and does not represent a hindrance to VDEQ closure approval of this unit.

Thank you for the opportunity to clarify this item. We await notification of closure approval.

Sincerely,

Peter W. Egan
Director of Regulatory Affairs

Cc: Robert Shaffer, Dames and Moore

South Central Wastewater Authority

900 Magazine Road
Petersburg, VA 23803
Tel: (804) 861-0111
Fax: (804) 861-3254

May 20, 2002

Mr. Gary Young
Facility Manager
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, Virginia 23875

Re: **Re-issuance of Permit No. 018**

Dear Mr. Young:

The review and comment period for the renewal of your facility's Industrial Pretreatment Program permit has ended. No comments were received from the City of Petersburg or Prince George County.

The Executive Director has signed the re-issued permit and is enclosed. Please note the renewed permit will become effective on May 22, 2002 at the expiration of the current permit.

If you should have any questions, please do not hesitate to contact me at (804) 861-0111.

Sincerely yours,

Clarence E. Waskey
Laboratory Manager/Pretreatment Coordinator

Cc: William J. Leary, P.E. – Executive Director SCWWA
Chris Dawson, P.E. – Assistant Executive Director SCWWA
Michael Briddell, P.E. – Acting Director of Public Works – City of Petersburg
Stephen McBride, P.E. – County Engineer – Prince George County
Kenneth Bartle – Senior Compliance Manager – Clean Harbors

900 Magazine Road
Petersburg, VA 23803
Tel: (804) 861-0111
Fax: (804) 861-3254

Permit No. 018

In accordance with all terms and conditions of the County of Prince George and the City of Petersburg conveyance systems, and the South Central Wastewater Authority (SCWWA) Discharge/Treatment Regulations and in accordance with any applicable provisions of Federal or State Law or regulations;

Permission Is Hereby Granted To:

Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, Virginia 23875

SIC Code: 5093
Centralized Waste Treatment
40 CFR Part 437

(804) 452-1800

For the discharge of Industrial Wastewater into the County of Prince George and the City of Petersburg conveyance systems in compliance with the SCWWA Treatment Regulations, any applicable Federal or State law or regulation and in accordance with discharge point(s), effluent limitations, monitoring and other conditions as set forth herein.

This permit is based on information provided in the permit application which together with the following conditions and requirements, is considered a part of this permit.

This permit is not transferable.

Effective Date: May 22, 2002
Expiration Date: May 22, 2007

Executive Director
South Central Wastewater Authority

5-17-02
Date

Part 1 – Wastewater Discharge Limitations

Clean Harbors Environmental Services, Inc. shall comply with the effluent limitations as referenced below (maximum for any one day mg/l).

	PCC		
Pollutant	Daily Maximum	Frequency	Sample Type
Cadmium, Total	0.250	Semi-Annual	Batch. Composite
Chromium, Total	1.920	Semi-Annual	Batch Composite
Copper, Total	4.95	Semi-Annual	Batch Composite
Lead, Total	2.219	Semi-Annual	Batch Composite
Nickel, Total	3.442	Semi-Annual	Batch Composite
Zinc, Total	3.690	Semi-Annual	Batch Composite
TSS	NL	Semi-Annual	Batch Composite
BOD5	NL	Semi-Annual	Batch Composite
COD	NL	Semi-Annual	Batch Composite
Phosphorous, Total	NL	Semi-Annual	Batch Composite
pH Maximum	11.5	Semi-Annual	Grab
pH Minimum	5.5	Semi-Annual	Grab
Ammonia-Nitrogen	NL	Semi-Annual	Batch Composite
Fats, Wax, Oils, Grease	500	Semi-Annual	Grab
Flash Point	> 140 F	Each Discharge	Grab

See Special Permit Monitoring, page 3 of 12

In addition, all other effluent limitations and general discharge prohibitions set forth in the SCWWA Wastewater Regulations and all applicable Federal and State limitations shall be met.

PCC – Local Limitations
NL – No Limitation monitoring required.

Part 2 – Sample Site

Sample site shall be 21,000 gallon frac tanks labeled as CH1 and CH2 as indicated on attached site specific map.

Part 3 – Self-Monitoring

Clean Harbors Environmental Services, Inc. shall self-monitor semi-annually for the following parameters:

Batch Composite Samples	Grab Samples
Total Cadmium	pH
Total Chromium	Fats, Wax, Grease, Oil
Total Copper	Flash Point
Total Lead	
Total Nickel	
Total Zinc	
TSS	
BOD5	
COD	
Total Phosphorous	
Ammonia-Nitrogen	

Special Permit Self-Monitoring Requirements

Clean Harbors Environmental Services, Inc. will self-monitor semi-annually for the following:

Parameters	Sample Type
Antimony	Batch Composite
Arsenic	Batch Composite
Mercury	Batch Composite
Selenium	Batch Composite
Cyanide, Total	Grab
Phenols	Grab
BTEX	Grab
Bis(2-ethylhexyl) phthalate	Grab
Naphthalene	Grab

The test results for the January-June semi-annual period are due no later than June 30 and the July-December semi-annual period are due no later than December 31, except for Flash Point which must be monitored prior to any discharge. **No discharge shall be made of waste with a flash point of less than 140 F.**

The above chemical analysis shall be in accordance with procedures as defined in 40 CFR Part 136. Flash Point to be determined by Tag Closed Cup Procedure.

Clean Harbors Environmental Services, Inc. is required to submit the self-monitoring reports to:

Executive Director
South Central Wastewater Authority
900 Magazine Road
Petersburg, Virginia 23803

The report shall include:

1. Sample date(s)
2. Sample location
3. Name of person sampling
4. Type of sample (grab, composite)
5. Method of collection
6. Date of analysis
7. Person (or Laboratory) performing the analysis
8. Average flow in gallons per day (GPD)

The self-monitoring reports must be signed by a responsible corporate official, company president, vice-president, administrator, or their designee. Clean Harbors Environmental Services, Inc. must within thirty (30) days of permit effective date or modification date, submit a letter to the Executive Director of the South Central Wastewater Authority with the name and title of the signee of self-monitoring reports. Letter must be from a responsible official, president, vice-president or administrator.

In the event of a violation of any permit parameter(s), Clean Harbors Environmental Services, Inc. must:

1. Notify the Executive Director or Industrial Pretreatment Coordinator at the South Central Wastewater Authority within twenty-four (24) hours of the permittee becoming aware of the violation. This notification may be oral with a detailed written report to be filed within five (5) days.

2. Immediately resample for three (3) consecutive days for the violated parameter and submit the test results within thirty (30) days.

Clean Harbors Environmental Services, Inc. shall retain and preserve for no less than three (3) years any records, books, documents, memoranda, reports, correspondence and any and all summaries thereof, relating to the monitoring, sampling and chemical analysis made by or in behalf of the permittee in connection with its discharge.

All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the County of Prince George, City of Petersburg, SCWWA or Department of Environmental Quality (DEQ) or U.S. EPA shall be retained and preserved by the permittee until all enforcement activities have concluded and all period of limitation with respect to any and all appeals have expired.

It is also the responsibility of the permittee to:

1. Immediately notify the County, City and SCWWA of slug loadings, accidental spills, or potential problems which could violate any of the prohibited discharge standards, whether or not such violation actually results, with written notification discussing circumstances and remedies to be submitted to the County, City and SCWWA within five (5) days of the occurrence.

2. Notify the County, City and SCWWA in writing a minimum of thirty (30) days prior to the introduction of new wastewater pollutants or any substantial change in the volume of the wastewater into the County and City conveyance systems and to SCWWA for treatment. Formal written approval by the County and City officials for conveyance and written approval by the Executive Director of SCWWA for treatment is required prior to introduction.

3. Provide formal written notice within thirty (30) days of substantial changes of a long-term nature to any manufacturing process or wastewater characteristics or flows.

Part 4 – Right of Entry

Clean Harbors Environmental Services, Inc. shall allow authorized representatives of SCWWA to:

1. Inspect the facilities of the permitted to ascertain whether the provisions of the permit and/or ordinance are being met;

2. Have access to and copy at reasonable hours and records required to be kept under the terms and conditions of this permit;

3. Have ready access at all times at all parts of the premises for the purpose of inspection and/or sampling in the performance of any of their duties;

4. Setup on the permittee's property such devices as are necessary to conduct sampling or metering operations.

Reasonable hours in the context of inspection and sampling includes any time the IU is operating any process which results in a process wastewater discharge to the County of Prince George (County), The City of Petersburg (City) sewage systems and to SCWWA for treatment. The SCWWA representative will contact the person in charge for right of entry purposes.

Part 5 – Standard Conditions

1. Dilution – No IU shall increase the use of potable or process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

2. Proper disposal of Pretreatment Sludge and Spent Chemicals – Disposal of sludge and spent chemicals generated shall be done in accordance with Section 405 of the Clean Water Act and Subtitle C and D of the Resource conservation and Recovery Act.

3. Confidential Information – Except for data determined to be confidential under Section 15-101 (C) of the County's Sewer Use Standards and Section 27-85(s) of the City's Sewer Use Standards, all reports required by this permit shall be available for public inspection at the office of the Executive Director of the SCWWA. Effluent data shall not be held confidential.

4. Signatory Requirements – All reports required by this permit shall be signed by a principal executive officer of the IU, or his/her designee.

5. Permit Violation – Each Industrial User must meet all of the limits of its permit at all times. If the results of self-monitoring reports or SCWWA conducted monitoring show that permits are being violated, the permit holder will be notified and must, within 5 days of such notification, forward a written report to the SCWWA indicating that the violation has been corrected or indicating what action is being taken to correct the violation and when it can be corrected. Permit violations also include failure to self monitor, failure to submit reports and data, failure to submit required reports within the required time period.

6. Permit Suspension – Should permit violation continue uncorrected, or should the nature of a discharge be such that, in the Executive Director's judgment, the safety or health of the public or the safety of the County's and/or City's wastewater system or of receiving water in jeopardy, the Executive Director may suspend the Industrial User's permit at which time all wastewater flow must stop until all deficiencies are corrected to SCWWA's satisfaction.

7. Revocation of Permit – The permit issued to the IU by the SCWWA may be revoked when, after inspection, monitoring or analysis it is determined that the discharge of wastewater to the sanitary sewer is in violation of Federal, State, or local laws, ordinances, or regulations. Additionally falsification or intentional misrepresentation of data or statements pertaining to the permit application or any other required reporting form, shall be cause for permit revocation.

   Wastewater flow must stop and will not be accepted again until a new acceptable application is received and a new permit is issued.

8. The SCWWA may seek civil or criminal penalties and injunctive relief for noncompliance with these regulations by the Industrial User.

9. If a permit violation is found to be directly or indirectly responsible for damage to any sewers or to any part of the SCWWA's wastewater system, the Executive Director or SCWWA may recover from the violator the repair or excess cost incurred by the SCWWA.

10. Falsifying Information or Tampering with Monitoring Equipment – Knowingly making false statements on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate, may result in punishment under the criminal laws of the County and City, as well as being subjected to civil penalties and relief.

11. Modification or Revision of the Permit –

    a. The terms and conditions of this permit may be subject to modification by the SCWWA at any time as limitations or requirements as identified by the SCWWA's Rules and Regulations are modified or other just cause exists.

    b. This permit may also be modified to incorporate special conditions resulting from the issuance of a special order.

    c. The terms and conditions may be modified to incorporate any new or revised Federal, State and Local pretreatment standards or requirements.

    d. A change in any condition in either the industrial user or the POTW that requires either at temporary or permanent reduction or elimination of the Authorized discharge.

e. Information indicating that the permitted discharge poses a threat to the Control Authority's collection and treatment systems, POTW personnel or the receiving waters.

12. Severability – The provisions of this permit are severable, and if the provision of the permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

13. Reapplication for a Permit – The Permittee shall submit an application for issuance of this permit at least 90 days before the current permit expires.

14. Property Rights – The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any invasion of personal rights, nor any infringement of Federal, State, or Local regulations.

15. Proper Operation and Maintenance of Pretreatment and Monitoring Facilities – The Industrial User is required to operate and maintain its facilities and monitoring equipment with proper diligence.

16. Limitations of Permit Transfers – The discharge permit cannot be transferred to another party, and is valid only for the company and facility to which it is issued.

17. Duty to Mitigate – The Industrial User must undertake all reasonable measures to mitigate the duration and severity of any violations of the permit.

18. Duty to Comply – By discharging to the County and City Conveyance Systems and treatment by the SCWWA under the permit, the industrial user has a duty to comply with its provisions.

19. Analytical Methods – The Industrial User's analytical procedures must be in accordance with 40 CFR Part 136.

20. Additional Discharge Testing – If the Industrial User conducts any testing on the facility discharge that is not included in the permit, the IU shall report the results to the Executive Director of SCWWA..

21. Operating upsets – Any permittee that experiences an upset in its operations that causes the facility to be in a state of temporary noncompliance with the provisions of this permit shall inform the SCWWA at (804) 861-0111. This telephone number is available 24 hours per day.

A written follow-up report of the upset shall be filed by the permittee with the SCWWA within five (5) days.

The report shall contain:

a) Description of the upset, the cause(s) thereof and the upset's impact on the permittee's compliance status;

b) Duration of noncompliance, including exact dates and times of noncompliance, and if not corrected, the anticipated time the noncompliance is expected to continue; and

c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset.

The report must also demonstrate that the treatment facility was operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be affirmative defense to any enforcement action brought against the permittee for violations attributable to the upset event.

22. Annual Publication – A list of all Industrial Users which were in significant non-compliance with applicable pretreatment requirements proceedings during the twelve (12) previous months shall be annually published by the SCWWA in the largest daily newspaper within its service area. Publication of the list shall be made in January of each year. Accordingly, the permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

23. Civil and Criminal Liability – Nothing in this permit shall exclude criminal penalties for noncompliance under the County, City and SCWWA rules and regulations.

24. Prohibited Discharge – No industrial User shall discharge:

(a) Any pollutant(s) which cause pass through or interference at the Publicly Owned Treatment Works (POTW);

(b) Pollutants which create a fire or explosion hazard in the POTW including, but not limited to waste streams with a closed cup flashpoint of less than 140 degrees F or 60 degrees C using test methods specified in 40 CFR 261.21;

(c) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.5 unless the work is specifically designed to accommodate such discharges;

(d) Solids or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

(e) Any pollutant, including oxygen demanding pollutants (BOD, etc) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;

(f) Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in case heat in such quantities that the temperature at the POTW exceeds 40 degrees C (104 degrees F);

(g) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

(h) Pollutants which result in the presence of toxic gases, vapor or fumes within POTW in a quantity that may cause worker health and safety problems;

(i) Any trucked or hauled pollutants except at discharge points designated by the POTW;

25. Significant Non-Categorical Industrial Users shall submit to the Control Authority (SCWWA) at least once every six months (on dates specified by the Control Authority) a description of the nature, concentration, and flow of the pollutants required to be reported by the Control Authority. These reports shall be based on sampling and analysis performed in the period covered by the report, and performed in accordance with the techniques described in 40 CFR Part 136 and amendments thereto. Where 40 CFR Part 136 does not contain sampling or

analytical techniques for the pollutant in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed by using validated analytical procedures, including procedures suggested by the POTW or other persons, approved by EPA.

26. Notification of changed discharge. All Industrial Users shall promptly notify the SCWWA in advance of any substantial change in the volume or character of pollutants in their discharge, including the listed or characteristic hazardous wastes for which the Industrial User has submitted initial notification under 40 CFR 403.12 (p).

27. (1) The Industrial User shall notify the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities in writing of any discharge into the SCWWA of a substance, which of otherwise disposed of, would be hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (contains, batch, or other). If the Industrial User discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification shall also contain the following information to the extent such information is known and readily available to the Industrial User. An identification of the hazardous constituents contained in the wastes, and estimation of the mass concentration of such constituents in the waste stream discharge during that calendar month, and an estimation of the mass of constituents in the waste stream expected to be discharged during the following twelve months. All notifications must take place within 180 days of the effective date 403.12(p). Industrial Users who commence discharging after the effective date of this rule shall provide the notification no later than 180 days after the discharge of the listed or characteristic hazardous waste.

Any notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed dischargers must be submitted under Item 26. The notification requirement in this section does not apply to pollutants already under the self-monitoring requirement of 40 CFR 403.12(b), (d), and (e).

(2) Dischargers are exempt from the requirements of Item (1) of this section during a calendar month in which they discharge no more than fifteen kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen kilograms of new acute hazardous waste in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33 (e), requires a one-time notification. Subsequent months during the Industrial User discharges more than such quantities of any hazardous waste requires additional notification.

(3) In the case of any new regulation under Section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the Industrial User must notify the POTW, the EPA Regional Waste Management Waste Division Director, and State hazardous waste authorities of the discharge of such substance within 90 days of the effective date of such regulations.

(4) In the case of any notification made under Item (1) of this section, the Industrial User shall certify that it has a program in place to reduce the volume and toxicity of Hazardous wastes generated to the degree it has determined to economically practical.

28. Reopener Clause

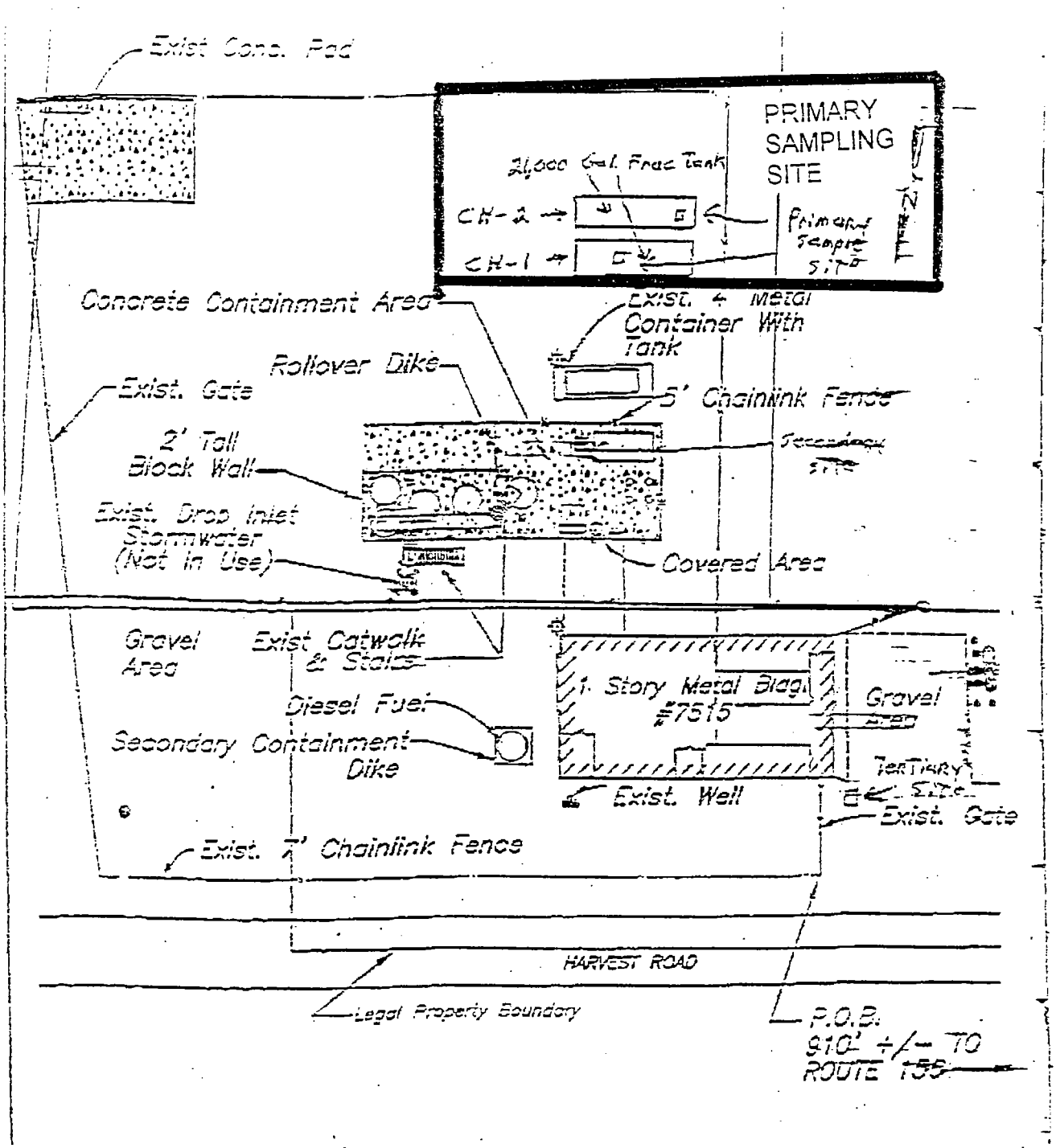
(1) This permit may be reopened and modified to incorporate any new or revised requirements that may be in a National Categorical Pretreatment Standard as promulgated by the United States Environmental Protection agency (U.S. EPA).

(2) This permit may be reopened and modified to incorporate any new or revised requirements resulting from the reevaluation of local limits by the Cities, Counties and the South Central Wastewater Authority (SCWWA).

(3) This permit may be reopened and modified to incorporate any new or revised requirements that may be developed by the South Central Wastewater Authority, Control Authority, as are necessary to ensure POTW compliance with applicable sludge management requirements promulgated by the U.S. EPA under 40 CFR Part 503 or any other Federal Regulations.

29. Right of Appeal – The permitee may petition to appeal the terms of this permit within thirty (30) days of the notice. This petition must be in writing; failure to submit a petition for review shall be deemed to be a waiver of the appeal. In its appeal, the permitee must indicate the provisions objected to, the reason for the objection and the alternative condition that it seeks to be placed in the permit.

30. Flow measurements – If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.



CLEAN HARBORS, INC.
PRINCE GEORGE, VIRGINIA

0 20 40 80

GRAPHIC SCALE

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 859048 • BRAINTREE, MA 02185-9048
(781) 849-1800
Visit our Website at www.cleanharbors.com

Certified Mail – Return Receipt Requested (70011940000427889725)

November 5, 2002

Department of Environmental Quality
Office of Financial Management
P.O. Box 10150
Richmond, VA 23240

Re: Revised Oil Discharge Contingency Plan
Clean Harbors Environmental Services, Inc.

Dear Sir or Madam:

Clean Harbors Environmental Services, Inc. (CHESI), located at 7515 Harvest Road in Prince George, Virginia, submitted to your office on October 18, 2002, an Oil Discharge Contingency Plan (ODCP) for review and approval. In addition to the ODCP, an ODCP Approval Application form and a check for $718.00 (payable to the Treasurer of Virginia) were also included.

Our consultant who developed the ODCP has notified me that they have made some revisions to the ODCP since the time I submitted it. Please find attached a revised copy of the ODCP for our Prince George facility.

If you have any questions regarding this submittal, please contact me at 781-849-1800 extension 4142.

Sincerely,

Wallace M Bell

Wallace M. Bell
Corporate Compliance Manager

Attachment (ODCP)

cc w/out attachment: Gary Young, CHESI

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET, P.O. BOX 859048 • BRAINTREE, MA 02185-9048
(781) 849-1800
Visit our Website at www.cleanharbors.com

Certified Mail – Return Receipt Requested (70011940000427889671)

October 18, 2002

Department of Environmental Quality
Office of Financial Management
P.O. Box 10150
Richmond, VA 23240

Re: Oil Discharge Contingency Plan Approval Application
Clean Harbors Environmental Services, Inc.

Dear Sir or Madam:

Clean Harbors Environmental Services, Inc. (CHESI), located at 7515 Harvest Road in Prince George, Virginia, is pleased to submit the attached Oil Discharge Contingency Plan (ODCP) for review and approval. In addition to the ODCP, an ODCP Approval Application form and a check for $718.00 (payable to the Treasurer of Virginia) are also attached.

If there are any questions regarding this submittal, please contact me at 781-849-1800 extension 4142.

Sincerely,

Wallace M Bell

Wallace M. Bell
Corporate Compliance Manager

Attachments (ODCP, ODCP application, check)

cc w/ attachments: Gary Young, CHESI

URS

5540 Falmouth Street, Suite 201
Richmond, VA 23230

FINAL
OIL DISCHARGE CONTINGENCY PLAN

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
7515 HARVEST ROAD
PRINCE GEORGE, VIRGINIA 23875

Prepared for:

CLEAN HARBORS ENVIRONMENTAL SERVICES, INC.
BRAINTREE, MASSACHUSETTS

URS Job No. 30898-006-155
November 1, 2002

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APPENDIX B	MSDS List of Typical Stored Petroleum Products
APPENDIX C	Notification Checklist
APPENDIX D	Oil Spill Equipment Inventory
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OIL DISCHARGE CONTINGENCY PLAN

The Virginia Department of Environmental Quality (VDEQ) has issued regulations that require any oil handling facility that has a total oil handling capacity of 25,000 gallons to prepare an Oil Discharge Contingency Plan. These plans must be prepared in accordance with good engineering practice and be approved by the VDEQ.

Section 62.1-44.34:15 of the Code of Virginia requires that all facility oil discharge contingency plans shall provide for the use of the best available technology (economically feasible, proven effective and reliable and compatible with the safe operation of the facility) at the time the plan is submitted for approval.

An Oil Discharge Contingency Plan, in order to be approvable, shall contain, at a minimum, the following requirements:

1. The name of the facility, geographic location and access routes from land and water if applicable;

This plan is for the Clean Harbors Environmental Services, Incorporated (CHESI) facility located at 7515 Harvest Road in Prince George, Virginia 23875. The main telephone number for the facility is (804) 452-1800. The facility consists of a maintenance shop/lab building, and a tank farm/processing area, enclosed by a chain-link fence. An office trailer is located just west of the building, outside the fence line.

The location of the facility in geographic coordinates is 37 deg 14' 37" N, 77 deg 15' 57" W. The location in UTM coordinates (zone 18) is 299,028 meters E, 4,124,306 meters N using the North American Datum of 1983. Figure 1 in Appendix A presents a large-scale map of the area showing the location of the facility.

The facility is located on 4.3 acres of land, 0.2 miles east of route 156 (Prince George Drive) on the southern side of Harvest road in Prince George County, Virginia. Harvest Road is approximately 3.3 miles south of the intersection of High Avenue and Oaklawn Boulevard in Hopewell. The facility is currently the first building on the right when

entering Harvest Road from Prince George Drive. High Avenue in Hopewell, Virginia, turns into Prince George Drive at the Hopewell southern city limit. Figure 2 in Appendix A presents a copy of the 1994 USGS Prince George topographical quadrangle map.

There are no water access routes to the facility.

2. The names of the operators of the facility including address and phone number;

The operator of the facility is CHESI located at 1501 Washington Street, Braintree, Massachusetts 02184. The environmental compliance coordinator for the Hopewell facility is Wallace M. (Mannie) Bell. He can be reached by telephone at (781) 849-1800 extension 4142. The on-site operations supervisor is Gary Young. He can be reached at (804) 452-1800 extension 225.

3. A physical description of the facility consisting of a plan of the facility which identifies the applicable oil storage areas, transfer locations, control stations, above and below ground oil transfer piping within the facility boundary (and including adjacent easements and leased property), monitoring systems, leak detection systems and location of any safety protection devices;

The subject facility is a used oil separation plant, which receives used and contaminated oil from the clean up of non-hazardous waste sites. The materials processed at the facility are not defined by Virginia as hazardous waste. There is no underground piping at the facility used for petroleum containing materials.

The facility is connected to a sanitary sewer force main in front of the building for the discharge of treated wastewater to the South Central Wastewater Authority's wastewater treatment facility in Petersburg, Virginia. A sanitary sewer line easement passes through the eastern edge of the site. There are no petroleum pipelines that connect to the facility.

The facility receives oil and petroleum materials contaminated with soils, water and other substances by vacuum truck, tanker trailer, drums and other means. The received material is segregated, sampled and analyzed in an on-site lab prior to unloading to

ensure that it does not contain hazardous ingredients. The in-house lab checks flashpoint, PCBs, and halogens. If any parameters are outside of the limits for listed or characteristic hazardous waste, the load is not accepted and other approved methods of disposal are pursued. CHESI has a hazardous waste treatment storage and disposal facility in Baltimore and hazardous materials collected by CHESI are typically shipped there for treatment.

The facility is designed to be flexible in operation, with multi-path piping and valving. The use of hoses with quick-connects ensures that the process equipment and piping is inspected regularly (any time it is used in a different configuration). This normally occurs every working day. Documented inspections are performed daily.

Three of the tanks are steam heated using internal steam coils connected to an oil-fired boiler inside the maintenance shop/lab building. The 150 HP boiler is fed with purchased virgin oil, which is stored in a 5000-gallon vertical wall tank in front of the building. The tank is surrounded by concrete containment of sufficient size to hold the tank contents plus precipitation. A 150-pound propane located tank next to the oil storage tank feeds the boilers pilot light.

Figure 3 in Appendix A presents a plan of the facility showing where the locations of the tank farm, processing equipment, truck unloading, drum storage, and solids processing areas. The concrete secondary containment structures are also shown.

4. A copy of the material safety data sheet (MSDS) or its equivalent for each oil or groups of oil with similar characteristics stored, transferred or handled at the facility.

The facility receives oil from a variety of sources. Copies of MSDSs for #2 diesel, #4 diesel, and #6 fuel oil are included in Appendix B. These oils are typical of the oils or group of oils processed at the facility. Copies of MSDSs for each specific oil processed are on file at the facility. The hazards involved in handling the specific oils received and

the fire-fighting procedures for the specific oils received are similar to those listed in the attached MSDSs.

5. The maximum storage or handling capacity of the facility and the individual tank capacities or, in the case of a pipeline, the average daily throughput of oil;

The tanks capacities are shown on Table 1.

Table 1
Oil Storage Capacity

Tank#	Contents	Capacity (gallons)	Construction
Fuel Oil	#2 fuel oil	5,000	Flat bottom
T-101	Water contaminated with gasoline	15,000	Flat bottom
T-4	Oil contaminated with water	9,800	Cone bottom tank
T-5	Oil contaminated with water	9,800	Cone bottom tank
	Total storage capacity	39,600	

All the listed tanks are above ground storage tanks (AST), constructed of steel. The flat bottom tanks are mounted on 3 inch thick grating over 6 inch I-beams to allow for visual detection of any release from the tank.

There is normally a tank trailer on-site, located within a concrete containment area, which is used to store recovered oil until a sufficient quantity is collected, typically 7,200 gallons. The recovered oil in the tank trailer is then transported to a facility that burns it for its heat value. Currently, the oil is sold to another company for use firing a lime kiln or in a boiler.

Up to 100 drums up to 55 gallons each are typically stored within the unloading containment area. Each drum is treated as an individual shipment and has a sample removed and analyzed for standard acceptance testing.

Other processing tanks

- A 10,000-gallon capacity flat bottom treated water tank (#6) within the containment structure.

- Two temporary steel tanks, each with 21,000 gallons capacity, are outside the containment structure. These hold treated water until analytical results are received before being pumped into a force main that discharges to the South Central Wastewater Authority's wastewater treatment plant.

These "other processing" tanks are not used for petroleum contaminated substances. They are only used to hold clean water that has passed through the oil/water separator, two bag filters in series, and two carbon filters in series.

The locations of the above ground storage tanks at the facility are shown on Figure 3.

6. A complete listing, including 24-hour phone numbers, of all federal, state and local agencies required to be notified in the event of a discharge;

In the event of a discharge, the following federal, state, and local agencies would be notified, as appropriate, based on the amount and location of the release, and the potential for environmental damage. A notification checklist is included in Appendix C.

The Hopewell Fire Department can be contacted at 911.

The South Central Wastewater Authority's Wastewater Treatment facility can be contacted at (804) 861-0111.

The Piedmont office of the Virginia Department of Environmental Quality can be contacted at (804) 527-5020.

The National Response Center can be contacted at (800) 424-8802.

City of Norfolk water treatment facility can be contacted at (757) 441-5678.

7. The position title of the individuals responsible for making the required notifications and a copy of the notification check-off list;

Gary Young, Operations Supervisor, is authorized and responsible for making the required notifications. He can be contacted during normal business hours at (804) 452-

1800 extension 225. His 24 hour pager number is (804) 697-4683. His home telephone number is (804) 733-0855. A notification checklist is included in Appendix B.

He is assisted by Wallace M. (Mannie) Bell, corporate compliance coordinator. Mannie can be reached at (781) 849-1800 extension 4142.

8. The position title, address and phone number of the individuals authorized to act on behalf of the operator to implement containment and cleanup actions.

Gary Young, Operations Manager, is authorized and responsible for acting to implement containment and clean-up actions. He can be contacted during business hours at (804) 452-1800 extension 225. His 24 hour pager number is (804) 697-4683. His home telephone number is (804) 733-0855.

He is assisted by Lance Wolfe, Facility Foreman. Lance can be reached during business hours at (804) 452-1800 extension 233. His 24 hour pager number is (804) 697-4682. His home telephone number is (804) 733-3792.

He is also assisted by Jim Nardozzi, General Manager. Jim can be reached during business hours at (804) 452-1800 extension 222. His 24 hour cellular telephone number is (202) 369-2131. His home telephone number is (804) 530-3092.

9. The position title of the individuals designated by the operator to ensure compliance during containment and cleanup of a discharge with applicable federal, state and local requirements for disposal of both solid and liquid wastes;

Gary Young, Operations Supervisor, is authorized and responsible for ensuring compliance with applicable federal, state and local requirements during containment and clean up of a discharge. He can be contacted at (804) 452-1800 extension 225.

He is assisted by Wallace M. (Mannie) Bell, compliance coordinator at the corporate compliance department. Mannie can be reached at (781) 849-1800 extension 4142.

10. Identification and ensurance by contract or other means acceptable to the board of the availability of private personnel and equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge.

CHESI is in the business of responding to oil discharges. As such, their employees are trained in spill response and they maintain an inventory at the facility of equipment and supplies for responding to oil spills and emergency situations. This equipment is available for use at the facility to respond to any on-site emergency. An inventory of equipment on-site is attached in Appendix C.

Even though CHESI has sufficient equipment available to respond quickly to any incident on-site including vacuum trucks, absorbents booms, and trained personnel, they have contacted other emergency service providers in the area listed below.

Accurate Marine Equipment, Norfolk, Virginia (757) 855-6555

Industrial Marine Service, Norfolk, Virginia (804) 543-5718

Although no current subcontractor agreements are in effect with other emergency response companies, they have coordinated response efforts in the past and similar cooperation is expected in the future.

11. Assessment of the worst-case discharge, including measures to limit the outflow of oil, response strategy and operational plan.

The largest tanks at the facility are the two treated water tanks at 21,000 gallons. These tanks are not used for oil or petroleum processing and do not contain petroleum contaminated materials. These tanks are outside of the concrete containment structures.

The largest tank used for oil and petroleum contaminated media is Tank T-101, which is rated to hold 15,000 gallons. This tank is contained in the processing containment structure, which has over 30,000 gallon capacity or approximately 200 percent of the largest tanks capacity. The containment structure has sufficient capacity to contain the

contents of the tank and processing equipment, with sufficient freeboard to contain accumulated precipitation. In the event of a release from tank T-101, the contents would be collected in the containment structure. In the event of a release from the containment structure, the material would flow into the facility perimeter drainage ditches, where it would be contained using available on-site supplies and equipment. In the event that the material passed the facility boundary, it would flow to the industrial parks' stormwater retention ponds, where an effective clean-up would occur.

Within the tank farm, the largest tanks are designated T-2 and T-3 each with 12,000 gallon capacity. Tanks T-2 and T-3 contain treated water, which has been separated from received materials. Tanks T-2 and T-3 are not classified as petroleum storage tanks.

Tanks T-4 and T-5 are also within the tank farm containment structure. These two tanks are petroleum storage tanks rated at 9,800 gallons each. The tank farm containment structure has a storage capacity of approximately 12,500 gallons or 127% of the capacity of the largest petroleum storage tank. The containment structure for the tank farm shares a common wall with the containment structures for the processing equipment area and the truck unloading area. In the event of a release, material from the tank farm containment could flow into the processing or truck parking containment structures. Any material which escaped the containment areas would spread across the graveled facility grounds, enter the stormwater ditches around the perimeter of the property and flow into the stormwater retention pond to the east of the facility. This pond drains to another stormwater retention pond southeast of the facility. These ponds would provide sufficient holding time for the facility to respond to the spill by deploying absorbent booms and pads on the affected retention ponds. It is not anticipated that a release would leave the immediate vicinity of the site, even during adverse weather events.

The fuel oil tank containing fuel for the process boiler is a vertical wall steel tank, with a flat bottom. The tank is mounted on three inch metal grating to allow visual inspection of tank condition and potential releases. The tank is located within a concrete containment structure.

The containment structures have been designed to meet the requirements of the Federal SPCC regulations, National Fire Protection Association specification 30, and the Occupational Safety and Health Administration regulation 1910.106.

The worst case discharge scenario would be the instantaneous release of the entire contents of Tank T-101, which has a capacity of 15,000 gallons. In accordance with VDEQ guidance, the quantity to use for discharge planning purposes is 4,125 gallons (125% of the tank capacity with a 22% "slosh" or release factor). The facility has sufficient spill control materials (booms, absorbents, gravel, etc.) to trap this amount of material on-site. The on-site vacuum truck would be used to collect this material, transport it and deliver it into one of the remaining tanks.

12. Inventory of facility containment equipment, including specification of quantity, type, location, time limits for gaining access to the equipment, and identification of facility personnel trained in its use;

A listing of the containment and clean-up equipment available on-site for use in a release is included in Appendix C. This equipment is located in the various buildings and sheds maintained on-site and is immediately available when required. A listing of trained personnel currently on staff at CHESI is included in Appendix D.

13. Identification and location of natural resources at risk (including, but not limited to, surface waters as indicated on the applicable USGS quadrangle maps, groundwater, public water supplies, public and private water wells and springs, state or federal wildlife management areas, wildlife refuges, management areas, sanctuaries, property listed on the National Register of Historic Places and property listed on the National Register of Natural Landmarks), priorities for protection and means of protecting these resources;

Drainage from the site flows through the facility perimeter ditches, into the small pond, approximately 2 acres in size, about 50 yards east of the facility. This pond drains

through two other ponds in series within the industrial park area. The water eventually drains into the Blackwater Swamp and the Blackwater River.

Prince George County contains several instances of endangered species including three plants (Trumpets *Sarracenia Flava,* Northern Joint-Vetch *Aeschynomene Virginica*, Sun-Facing Coneflower *Rudbeckia Heliopsidis)* and one animal (Fox Squirrel *Sciurus niger niger).* Most of these species would be expected to occur near water bodies. A release from this facility that reached the Blackwater Swamp or the Blackwater River could impact these species if mitigation measures are not implemented promptly.

Local residents use groundwater wells for drinking water supplies. However, the potential spills from the CHESI are not expected to have an impact on local groundwater, since effective clean-up measures would be initiated immediately.

Based on a survey of risk, the following items are not applicable, being at low risk for impacts from spills: groundwater, public water supplies, public and private water wells and springs, wildlife management areas, wildlife refuges, management areas and sanctuaries, locations on the National Register of Historic Places or National Register of Natural Landmarks.

The priority for protection of natural resources is to keep any spilled material on-site and away from the stormwater ponds. This will prevent impacts to the Blackwater Swamp and River.

14. Identification and location of any municipal or other services (including, but not limited to, storm drains, storm water collection systems and sanitary sewer systems) at risk, notification procedures applicable and means of protection of these services.

The nearest public water supply at risk is near Burdette, Virginia approximately 60 miles downstream of the facility. Potential releases from the CHESI facility are not expected to have an impact on this facility. There are no municipal storm drains, or stormwater collection systems in the area or at risk from a spill at the facility.

The local stormwater drainage system drains to two ponds completely contained within one-half mile of the facility. These ponds drain to an unnamed tributary of the North Fork of the Blackwater River.

An underground sanitary sewer force main traverses the facility on the eastern side. This pipeline would not be at risk from a spill at the facility as it is normally under pressure. This pipeline, however, could serve as a conduit for spreading contamination if a spill at the facility penetrated the soils and contacted the piping. The planned response actions would prevent any spilled material from contacting this pipeline and no impacts to this system are expected from facility actions.

15. If applicable, the facility's responsibility for responding to a discharge from a vessel moored at the facility and the identity of the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously;

This section does not apply to the CHESI facility in Hopewell, Virginia. The facility is not located near a navigable waterway. No vessels can be moored at the facility.

16. A description of training, equipment testing, and periodic unannounced oil discharge drills conducted by the operator to mitigate or prevent the discharge or the substantial threat of a discharge;

The CHESI personnel listed in Appendix D are 40 hour HAZWOPER trained and receive an eight-hour refresher course every year. This is done by attending a 45-minute training session every month, ensuring that all the required topics are reviewed. Detailed documentation is retained on the training received by each employee.

Daily and weekly inspections are performed at the facility using a detailed documented procedure. Facility personnel are trained in the inspection procedures prior to performing any inspections and are retrained when the procedure changes or, at a minimum, every three years. Inspection records are retained at the facility for five years.

CHESI is in the business of responding to spills. They have trained responders, and lots of equipment readily available for spill containment and cleanup. Unplanned and unannounced requests for oil spill response are a major part of CHESI's business.

17. The facility's oil inventory control procedures.

The tanks at the CHESI facility are constructed of steel with vertical walls and are suitable for visual inspection for detection of releases. Two of the tanks have cone bottom, and three have flat bottoms. The flat bottom tanks are mounted on three inch thick metal grating to allow detection of any leaks from the tanks. This installation method permits easy inspection of the tank condition and ready identification of release points. The tanks are located within concrete containment structures to prevent incidental leaks or spills from release to the surface.

Each tank has visual gauges

All piping used to transport oil at the facility is installed aboveground and available for visual inspections, which are performed daily as part of normal operations. In addition, a daily documented inspection is performed. Records from the inspections are retained in the Operations Managers office in the Maintenance Building.

The oil inventory in each tank and the on-site tanker trailer is checked daily as part of normal operating practices. In addition, daily and weekly documented inspections are performed. Records of these inspections are retained in the Operations Managers office in the Maintenance Building.

18. A detailed description of a system for early detection of a discharge to groundwater, utilizing up-gradient and down-gradient leak detection monitoring wells or other groundwater protection measures acceptable to the board (i.e., visual, interstitial, vapor and leak detection groundwater monitoring wells).

Visual inspections are possible for all tanks and equipment. If a visual inspection reveals any abnormalities, any equipment that does not meet the facility's requirements is

removed from service and replaced with suitable equipment. Leak detection is performed visually as part of normal operating practices. A daily documented inspection is performed. Records of these inspections are retained in the Operations Managers office in the Maintenance Building.

All the tanks have vertical sides, with either cone bottom or flat bottoms mounted on three-inch gratings, to allow easy inspection and ready identification of leaks. In the event of a release, operating personnel isolate the point of discharge and implement measures to stop the release. Containment and clean-up measures are then implemented to prevent the material from impacting groundwater resources.

19. The procedures to be followed, upon detection of a discharge of oil, for testing and inspection of all tanks, piping and all oil transfer associated equipment that could reasonably be expected to be a point source for the discharge.

If a discharge of oil is detected, all processing would cease and all pipes, tanks and oil transfer equipment would be visually inspected. The source of the spill would be localized and identified. If the leak is from the above ground piping inside the containment structures, the appropriate valves would be used to stop the discharge. Leaks from tanks would flow into the containment structures. The on-site supplies and dedicated vacuum truck would be used to immediately initiate material removal from the affected tank, empty the containment structures and perform follow-up remedial actions.

After the spill is contained and cleaned up, a visual inspection would be performed on all the tanks, piping, valves and processing equipment. All the equipment and piping is above ground and within containment structures. Visual inspections are possible for all tanks and equipment. If a visual inspection reveals any abnormalities, any equipment that does not meet the facility's requirements is removed from service and replaced with suitable equipment.

20. The facility's preventive maintenance procedures applicable to the critical equipment of an oil storage and transfer system as well as the maximum pressure for each oil transfer system.

The facility is designed to be flexible in operation, with multi-path piping using multiple valves. Hoses with "quickconnects" are used to transfer materials from the processing area to the oil storage tanker and to the treated water holding tanks. This allows and requires the facility personnel to perform daily inspections on the tanks, other processing units, hoses, and piping. A formalized visual inspection procedure is completed daily. If a visual inspection reveals any abnormalities, any equipment that does not meet the facility's requirements is removed from service and replaced with suitable equipment. Records of the daily inspections are maintained in the Operations Manager's office. A more formal inspection of the piping, as required by SPCC and ODCP regulations, will be performed in accordance with industry standards and regulatory requirements.

21. A description of the security procedures used by facility personnel to avoid intentional or unintentional damage to the facility.

The facility is surrounded by a six-foot tall barbed-wire-topped chain link fence. The facility operates from 8 AM to 5 PM on normal working days. The chain link fence gate is kept closed during working hours and padlocked shut when the operation is not staffed. Signs embossed with "Caution- Authorized Personnel Only" are posted along the fence at each gate, and at 50-foot intervals along other sections. Prince George County police routinely patrol the industrial area.

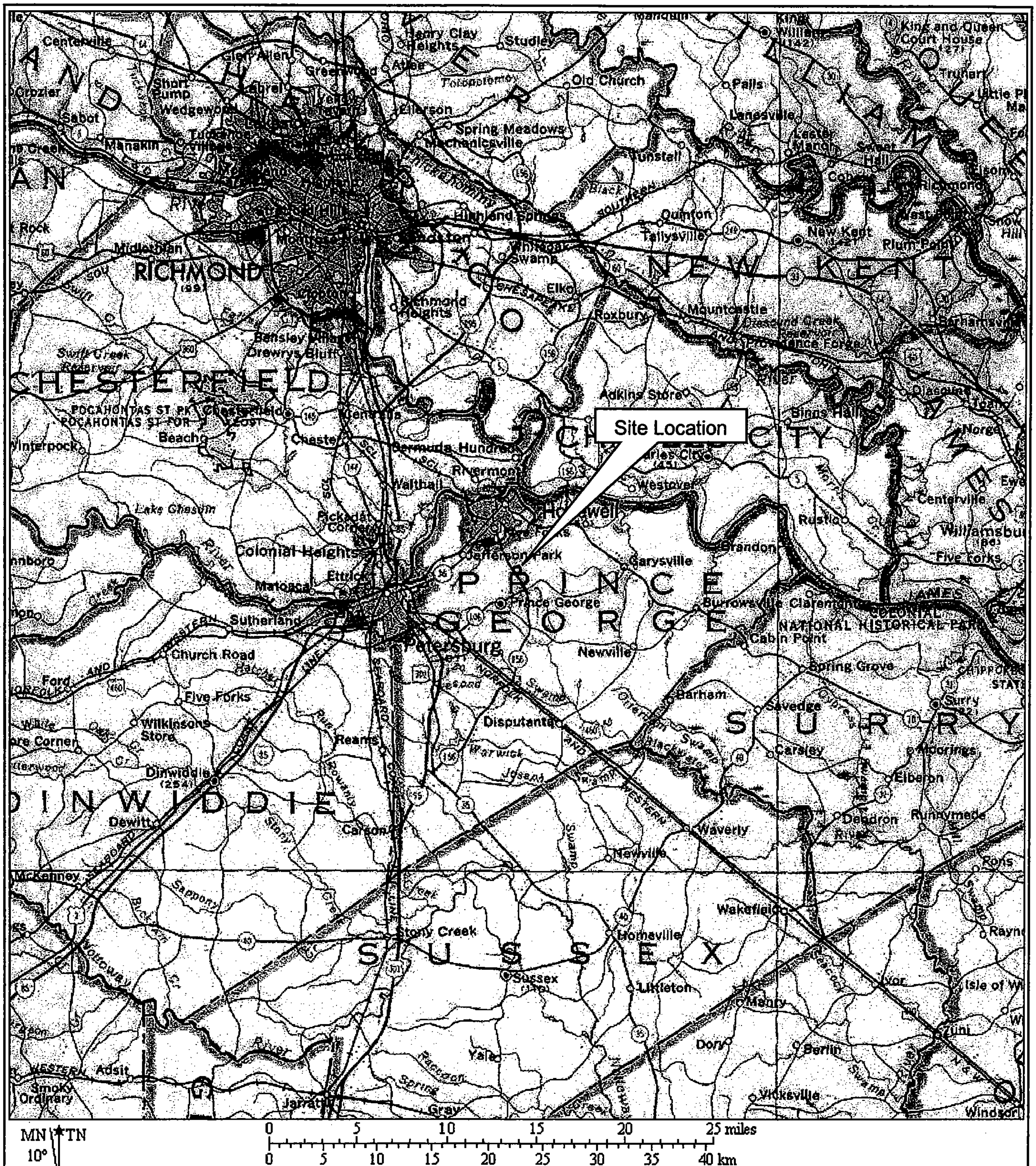
Facility lighting is appropriate for the facility. It is sufficiently lit to enable the discovery of spills during hours of darkness, both by operating personnel and is sufficiently lit to prevent spills occurring through acts of vandalism.

22. A post-discharge review procedure to assess the discharge response in its entirety.

In the event of a discharge from the facility, a post discharge review will be performed to assess the spill identification, response actions and remedial activities. Personnel involved in the incident will discuss improvements to established procedures and equipment requirements. This review will be performed within one week of the incident and will be documented. The documentation will be stored in the Operations Manager's files in the maintenance shop/lab building.

APPENDIX A

Figures and Diagrams



Note. Site boundaries are approximate.

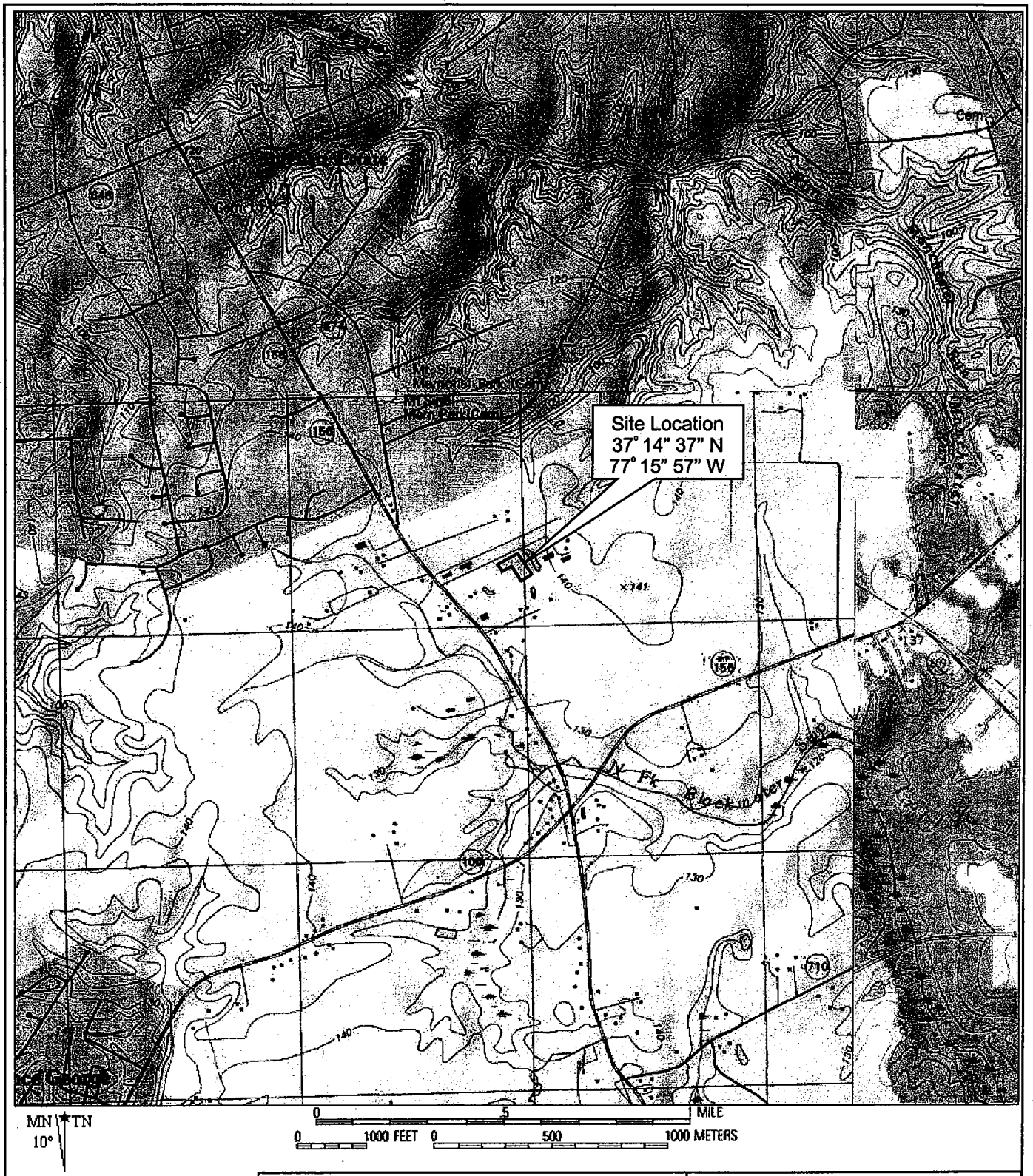
Source: USGS Quad, Prince George, Virginia, 1994 TOPO! ©2000 National Geographic Holdings WWW.TOPO.COM

FIGURE 1			
Site Location Map			
Date: *September 2002*		URS Project No.: *30898-006-155*	
Drawn by: *DMG*	Checked by: *DMG*	Reviewed by: *DRT*	Approved by: *DRT*
Scale: *As Shown*		File name: *Fig 1 Vicinity Map*	

Clean Harbors Environmental Services Inc.
Prince George Facility
7515 Harvest Road
Prince George County, Virginia

URS

URS CORPORATION
5540 FALMOUTH ST.,
SUITE 201
RICHMOND, VA 23230



Note. Site boundaries are approximate.

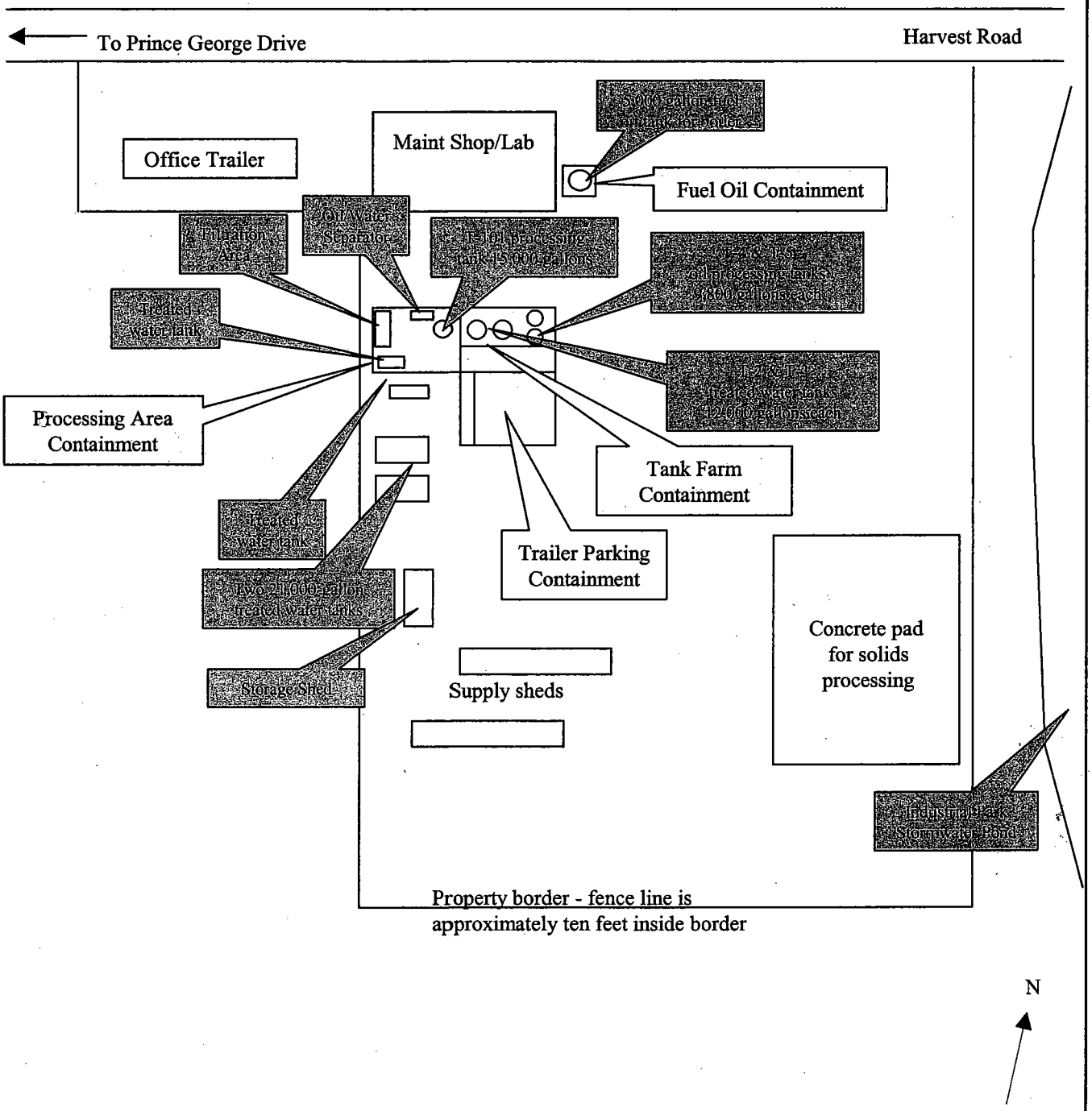
Source: USGS Quad, Prince George, Virginia, 1994 TOPO! ©2000 National Geographic Holdings WWW.TOPO.COM

FIGURE 2			
Site Vicinity Map			
Date: *September 2002*		URS Project No.: *30898-006-155*	
Drawn by: *DMG*	Checked by: *DMG*	Reviewed by: *DRT*	Approved by: *DRT*
Scale: *1 Inch = 2,000 Feet*		File name: *Fig 1 Vicinity Map*	

Clean Harbors Environmental Services Inc.
Prince George Facility
7515 Harvest Road
Prince George County, Virginia

URS

URS CORPORATION
5540 FALMOUTH ST.,
SUITE 201
RICHMOND, VA 23230



Note. Site boundaries are approximate.

FIGURE 3				Clean Harbors Environmental Services, Inc. Prince George Facility 7515 Harvest Road Prince George County, Virginia
Processing Equipment Layout				
Date: *September 2002*		URS Project No.: *30898-006-155*		
Drawn by: *DMG*	Checked by: *DMG*	Reviewed by: *DRT*	Approved by: *DRT*	URS — URS CORPORATION 5540 FALMOUTH ST., SUITE 201 RICHMOND, VA 23230
Scale: *Not to Scale*		File name: *Fig 3 Layout*		

APPENDIX B

Material Safety Data Sheets for typical materials processed

MATERIAL SAFETY DATA SHEET

Dynalife® Motor Oil (All Grades)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Synonyms: 5W-30; 10W-30; 10W-40
Formula: Mixture
Chemical Family: Mixture
CAS Number: Mixture
SAP Code: 1037030; 1037041; 1037043; 1037044; 1037045; 1037046
Product Code: 41530; 41103; 41104
MSDS Number: 716520
NFPA Ratings: Health 0, Flammability 1, Reactivity 0
HMIS Ratings: Health 0, Flammability 1, Reactivity 0
Intended Use(s): Passenger Car Engine Oil

The intended use of this product is indicated above, if any additional use is known please contact us at the Technical Information number listed below.

Manufactured By: Phillips 66 Company
A Division of Phillips Petroleum Company
Bartlesville, Oklahoma 74004

Phone Numbers
Emergency: (918) 661-8118
Technical Information: (800) 766-0050
For Additional MSDSs: (918) 661-5974

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Specification and CAS #	Weight % In Product*	ACGIH TLV (TWA)	ACGIH Short Term Exposure Limit	ACGIH Ceiling Limits	ACGIH Skin Designation	OSHA Final PEL (TWA)	OSHA - Final PELs - Ceiling Limits	OSHA - Final PELs - Skin Notation
Lubricating Oil Base Stock 64741-89-5, 64742-54-7 or 64741-88-4	> 80%	NE	NE	NE	NE	NE	NE	NE
Proprietary Additives	< 20%	NE	NE	NE	NE	NE	NE	NE

See Section 8 for additional Exposure Limits.

* 1% = 10,000 ppm.

3. HAZARDS IDENTIFICATION

Emergency Overview

Non-Hazardous. Pressure Injection. Lung Aspiration Hazard.

Potential Acute Health Effects

Eye Contact: May cause mild irritation.

Skin Contact: May cause mild irritation with prolonged or repeated contact.

Inhalation: None expected under normal use. Excessive exposure to mists or vapors generated by heat may cause irritation to eyes, nose, throat and lungs.

Ingestion: Do not ingest. If swallowed, may be aspirated resulting in inflammation and possible fluid accumulation in the lungs.

Aggravated Medical Conditions: No Known Applicable Information.

4. FIRST AID MEASURES

Eye Contact: Flush eyes with running water for at least 15 minutes. If irritation or adverse symptoms develop, seek medical attention.

Skin Contact: Wash skin with soap and water. If irritation or adverse symptoms develop, seek medical attention.

Inhalation: Remove from exposure. If illness or adverse symptoms develop, seek medical attention.

Ingestion: DO NOT induce vomiting. Seek immediate medical attention.

Notes To Physician: For injection injuries, immediate medical treatment is required. Physicians may call the emergency number (918) 661-8118.

Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

5. FIRE FIGHTING MEASURES

Flash Point: 420F (215C)
FP Method: COC
Ignition Temperature: Unknown

Flammable Limits (% by Volume in Air)
Lower Explosive Limit - 0.9
Upper Explosive Limit - 7

Fire Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam

Fire Fighting Procedures: Evacuate area and fight fire from a safe distance. Shut off source, if possible. Use NIOSH approved self-contained breathing apparatus and other protective equipment and/or garments described in Section 8 if conditions warrant. Use water spray to cool nearby containers and structures exposed to fire.

Fire and explosion hazards: Carbon oxides and various hydrocarbons forms when burned.

6. ACCIDENTAL RELEASE MEASURES

Sweep or gather up material and place in proper container for disposal or recovery.

7. HANDLING AND STORAGE

Avoid contact with eyes, skin or clothing. Avoid breathing vapors, mist, fume or dust. DO NOT swallow. May be aspirated into lungs. Wash thoroughly after handling. Use with adequate ventilation. Wear protective equipment and/or garments described in Section 8 if exposure conditions warrant. Launder contaminated clothing before reuse. If pressure injected under the skin, can cause gangrene if not treated.

Store in closed container. Store in well-ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Wear safety glasses.

Respiratory Protection: For concentrations exceeding an applicable exposure limit, use NIOSH approved air purifying respirator equipped with P95 filters, for particulate with time weighted average exposure limit not less than 0.05 mg/M3.

Skin Protection: Use gloves resistant to the material(s) contained in this product (Nitrile, Viton or Neoprene).

Ventilation: Use adequate ventilation to control concentrations below applicable exposure limits.

Other Personal Protection: Personal protection information shown in Section 8 is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

Exposure Limits: OSHA PEL and ACGIH TLV for oil mists is 5 mg/m3.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Amber to brown
Odor:	Mild Petroleum
Odor Threshold (ppm):	Unknown
Boiling Point:	Not Established
Melting/Freeze Point:	-30F (-34C)
Vapor Pressure:	< 1
Vapor Density (Air=1):	Not Established
Specific Gravity @ 20 C (Water=1):	0.88
Percent Volatile by Volume:	Unknown
Evaporation Rate (Butyl Acetate=1):	Not Established
Water Solubility:	Insoluble
Viscosity:	Not Established

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Incompatability (Materials to Avoid):	Strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.
Hazardous Decomposition Products:	Carbon oxides and various hydrocarbons are formed when burned.

11. TOXICOLOGICAL INFORMATION

Subchronic and Chronic Effects:

Prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as lung inflammation. This condition usually causes no symptoms.

Other Health Effects:

Pressurized injection of product under the skin can lead to seriously inflammed tissue. If left untreated injury can become gangrenous.

Continuous skin contact with used motor oils has caused skin cancer in laboratory animals. Avoid prolonged skin contact with used motor oil.

These products may contain petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking or severe hydrotreating. None of the oils require a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute Data:

No data available.

12. ECOLOGICAL INFORMATION

No data at this time.

13. DISPOSAL CONSIDERATIONS

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Ground Transportation
DOT Shipping Description: Not Regulated

Water Transportation
IMDG Shipping Description: Not Regulated

Air Transportation
ICAO/IATA Proper Shipping Name: Not Regulated

15. REGULATORY INFORMATION

Lubricating Oil Base Stock > 80%
Regulated Substance on TSCA Inventory: Listed
Canada - Domestic Substances List: Listed

Proprietary Additives < 20%
Regulated Substance on TSCA Inventory: Listed

EPA SARA 311/312 (Title III Hazard Categories)

Acute Health:	No
Chronic Health:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactivity Hazard:	No

16. OTHER INFORMATION

Revision Summary: New MSDS.

Preparer: Health, Environment and Safety Department
Date Prepared: 08/14/2001

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Material Safety Data Sheet

Chevron Fuel Oil 6

MSDS: 1411 **Revision #:** 8 **Revision Date:** 03/01/96

Click here to search the product data sheet database

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEVRON Fuel Oil 6

PRODUCT NUMBER(S): CPS283636 CPS285060 CPS285652 CPS285654
CPS286150

COMPANY IDENTIFICATION

Chevron USA Products Company
Environmental, Safety, and Health
Room 2900
575 Market St.
San Francisco, CA 94105-2856

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or
(510)231-0623 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (202)483-7616

PRODUCT INFORMATION: (800)822-5823 MSDS Requests
(510)242-7131 Technical

---

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % CHEVRON Fuel Oil 6

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
FUEL OIL, NO. 6 Chemical Name: FUEL OIL, NO. 6 CAS68553004	100.0%	NONE	NA
INCLUDING			
CAT CRACKED CLARIFIED OIL Chemical Name: CLARIFIED OILS, CATALYTIC CRACKED CAS64741624		NONE	NA
TOTAL SULFUR, MASS %	< 2.5%		

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	TPQ - Threshold Planning Quantity
RQ - Reportable Quantity	PEL - Permissible Exposure Limit
C - Ceiling Limit	CAS - Chemical Abstract Service Number
A1-5 - Appendix A Categories	() - Change Has Been Proposed

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

Black liquid.

- COMBUSTIBLE
- HEATING MAY RELEASE HIGHLY TOXIC AND FLAMMABLE HYDROGEN SULFIDE (H2S) GAS
- PROLONGED OR REPEATED SKIN CONTACT MAY INCREASE THE RISK OF SKIN CANCER
- CANCER SUSPECT AGENT

****

POTENTIAL HEALTH EFFECTS
EYE:
This substance is not expected to cause prolonged or significant eye irritation. This hazard evaluation is based on the data from similar materials.
SKIN:
Expected to cause no more than minor skin irritation, but prolonged or frequently repeated skin contact may be harmful. If absorbed through the skin, this substance is considered practically non-toxic to internal organs. This hazard evaluation is based on data from similar materials.
INGESTION:
If swallowed, this substance is considered practically non-toxic to internal organs. This hazard evaluation is based on data from similar materials.
INHALATION:
Prolonged breathing of vapors can cause central nervous system effects. This substance contains sulfur compounds which may form hydrogen sulfide. The rotten eggs odor of hydrogen sulfide is unreliable as an indicator of concentration. The U.S. Occupational Safety and Health Administration (OSHA) considers an atmophere containing concentrations of H2S greater than 100 ppm to be Immediately Dangerous to Life and Health (IDLH). This hazard evaluation is based on data from similar materials.
SIGNS AND SYMPTOMS OF EXPOSURE:
INHALATION: Central nervous system effects may include one or more of following: headache, dizziness, loss of appetite, weakness and loss of coordination.
CARCINOGENICITY:
This product may contain significant amounts of polynuclear aromatic hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing of mists or vapors should be reduced to a minimum.

This product contains a mixture of petroleum hydrocarbons called middle distillates (which means they boil between approximately 350F and 700F). Because of this broad description, many products are considered middle distillates yet they are produced by a variety of different petroleum refining processes. Toxicology data developed on some middle distillates

found that they caused positive responses in some mutagenicity tests and caused skin cancer when repeatedly applied to mice over their lifetime. This product may contain some middle distillates found to cause those adverse effects.

4. FIRST AID MEASURES

EYE:
No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.
SKIN:
Remove contaminated clothing. Wash skin thoroughly with soap and water. See a doctor if any signs or symptoms described in this document occur. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing.
INGESTION:
If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.
INHALATION:
If any signs or symptoms as described in this document occur, move the person to fresh air. If any of these effects continue, see a doctor. If there are signs or symptoms as described in this document due to breathing hydrogen sulfide, move the person to fresh air. If breathing has stopped, apply artificial respiration. Call a doctor.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:
FLASH POINT: (P-M) 150F (65C) Min.
AUTOIGNITION: 765F (487C)
FLAMMABILITY LIMITS (% by volume in air): Lower: NDA Upper: NDA
EXTINGUISHING MEDIA:
CO_2, dry chemical, foam and water fog.
NFPA RATINGS: Health 0; Flammability 2; Reactivity 0.
FIRE FIGHTING INSTRUCTIONS:
Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
COMBUSTION PRODUCTS:
Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (202)483-7616
ACCIDENTAL RELEASE MEASURES:
Eliminate all sources of ignition in vicinity of spill or released vapor.

Clean up spills immediately, observing precautions in Exposure Controls/ Personal Protection section. Clean up small spills using appropriate

techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases. This material is considered to be a water pollutant and releases of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems.

U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. Keep container closed.

DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid. Toxic quantities of hydrogen sulfide (H2S) may be present in storage tanks and bulk transport vessels which contain or have contained this material. Persons opening or entering these compartments should first determine if H2S is present. See Exposure Controls/Personal Protection section. DO NOT ATTEMPT RESCUE WITHOUT WEARING APPROVED SUPPLIED-AIR OR self-contained breathing equipment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS
Use this material only in well ventilated areas.

PERSONAL PROTECTIVE EQUIPMENT
EYE/FACE PROTECTION:
No special eye protection is usually necessary.
SKIN PROTECTION:
Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.
RESPIRATORY PROTECTION:
No special respiratory protection is normally required. However, if operating conditions create high airborne concentrations, the use of an approved respirator is recommended. Note: If any of the applicable hydrogen sulfide standards are likely to be exceeded, positive supplied-air respiratory protection must be used. The ACGIH TWA for hydrogen sulfide is 10 ppm. The OSHA STEL is 15ppm.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Black liquid.

pH:	NDA
VAPOR PRESSURE:	NDA
VAPOR DENSITY (AIR=1):	NDA
BOILING POINT:	NDA
FREEZING POINT:	NDA
MELTING POINT:	NA
SOLUBILITY:	Soluble in hydrocarbon solvents; insoluble in water.
SPECIFIC GRAVITY:	1.0 @ 15.6/15.6C (Min.)
EVAPORATION RATE:	NDA

VISCOSITY: 380 cSt @ 50C (Min.)
PERCENT VOLATILE (VOL): NDA

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
Heating this material may produce hydrogen sulfide.
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
No data available.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
The Draize Eye Irritation Score (range, 0-110) in rabbits is 4.0 - 7.3/110.
SKIN EFFECTS:
The dermal LD50 in rabbits is greater than 5 ml/kg. The Draize Skin Primary Irritation Score (range 0-8) for a 4-hour exposure (rabbits) is 0.2 - 1.5.
ACUTE ORAL EFFECTS:
The oral LD50 in rats is greater than 5 ml/kg.

ACUTE INHALATION EFFECTS:
No product toxicology data available. The hazard evaluation was based on data from similar materials.

The data above is obtained from studies sponsored by the American Petroleum Institute.
CHRONIC EFFECTS/CARCINOGENICITY:
Residual (heavy) fuel oils were reviewed by the International Agency for Research on Cancer (IARC) in their Monograph Volume 45 (1989). Evidence for causing cancer was considered inadequate in humans and sufficient in animals. IARC placed this material in Category 2B, considering it possibly carcinogenic to humans.

This material contains the high-boiling fraction of catalytically cracked oils. The International Agency for Research on Cancer (IARC) in Monograph 33 (1984) and Supplement 7 (1987) included these oils in their definition of Untreated and Mildly-Treated Oils. IARC considers these oils to be Group 1, or human, carcinogens.

This material contains Cat Cracked Clarified Oil. Tests have shown it to cause skin cancer, liver and thymus damage, anemia, fetal death and birth defects in laboratory animals. These effects were observed after prolonged and repeated skin contact. It must be assumed that these effects could also occur in humans after prolonged or repeated skin contact, therefore, appropriate skin protection is essential when handling this material.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
The 96-hour LC50 in Atlantic silverside (Menidia menidia) is 130 mg/l.
The 96-hour EC50 in diatom (Skeletonema costatum) is 160 mg/l.
ENVIRONMENTAL FATE:
No data available.

13. DISPOSAL CONSIDERATIONS

This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by USEPA under RCRA (40CFR261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: GAS OIL
DOT HAZARD CLASS: COMBUSTIBLE LIQUID
DOT IDENTIFICATION NUMBER: UN1202
DOT PACKING GROUP: III

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12(b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8(d)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4(a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304	19=Chevron TWA	30=Chevron STEL
10=PA RTK	20=EPA Carcinogen	

The following components of this material are found on the regulatory lists indicated.

CLARIFIED OILS, CATALYTIC CRACKED
is found on lists: 06,
FUEL OIL, NO. 6
is found on lists: 08,

16. OTHER INFORMATION

NFPA RATINGS: Health 0; Flammability 2; Reactivity 0;
(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
This revision updates Section 3 (Hazards Identification).

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 4054, Richmond, CA 94804

****

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

NDA - No Data Available NA - Not Applicable

****
THIS IS THE LAST PAGE OF THIS MSDS.
****

Material Safety Data Sheet

Chevron LS Diesel 2

MSDS: 6894 **Revision #:** 3 **Revision Date:** 06/09/01

Click here to search the product data sheet database

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

DIESEL FUEL NO. 2

PRODUCT NUMBER(S): CPS220122 CPS225114 CPS225115 CPS225150
CPS266176 CPS270005 CPS271006 CPS272093
CPS272102 CPS272126 CPS272152 CPS272185
CPS272190 CPS272593 CPS272601 CPS272693
CPS272793 CPS273003 CPS273030 CPS273053
CPS275000

SYNONYM: CALCO LS Diesel 2
CHEVRON LS Diesel 2
Diesel Fuel Oil
Gas Oil
HS Diesel 2
HS Heating Fuel 2
LS Diesel 2
LS Heating Fuel 2
Marine Diesel
RR Diesel Fuel

COMPANY IDENTIFICATION

Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or
(510)231-0623 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (703)527-3887
Emergency Information Centers
are located in U.S.A.
Int'l collect calls accepted

PRODUCT INFORMATION: MSDS Requests
(800) 689-3998
(510) 242-5357 Technical Information

SPECIAL NOTES: This MSDS covers all Chevron and Calco non-CARB Diesel No.2 Fuels. The sulfur content is less than 0.5% (mass). Red dye is added to non-taxable fuel.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % DIESEL FUEL NO. 2

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
DIESEL FUEL NO. 2			
Chemical Name: FUELS, DIESEL, NO. 2			
CAS68476346	100.00%	350 mg/m3	Chevron TWA
		1000 mg/m3	Chevron STEL
POTENTIALLY			
INCLUDING			
HDS DISTILLATE, MIDDLE			
Chemical Name: DISTILLATES, HYDRODESULFURIZED MIDDLE			
CAS64742809		NONE	NA
GAS OIL, LIGHT			
Chemical Name: DISTILLATES, STRAIGHT RUN MIDDLE			
CAS64741442		NONE	NA
KEROSENE			
Chemical Name: KEROSINE			
CAS8008206		NONE	NA
HYDRODESULFURIZED KEROSINE			
Chemical Name: KEROSINE, HYDRODESULFURIZED			
CAS64742810		NONE	NA
CAT CRACKED DISTILLATE, LIGHT			
Chemical Name: DISTILLATES, LIGHT CATALYTIC CRACKED			
CAS64741599		NONE	NA
TOTAL SULFUR, MASS %	< 0.50%		

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

Clear to pale yellow liquid if undyed, red liquid if dyed with a faint petroleum hydrocarbon odor.

- COMBUSTIBLE LIQUID AND VAPOR
- HARMFUL OR FATAL IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE
- CAUSES SKIN IRRITATION
- POSSIBLE CANCER HAZARD - CONTAINS MATERIAL THAT MAY CAUSE CANCER BASED ON ANIMAL DATA

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IMMEDIATE HEALTH EFFECTS
EYE:
Not expected to cause prolonged or significant eye irritation.
SKIN:
Contact with the skin causes irritation.
INGESTION:

Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.
INHALATION:
Excessive or prolonged breathing of this material may cause central nervous system effects. Mists of this material may cause respiratory irritation.
SIGNS AND SYMPTOMS OF EXPOSURE:
Skin irritation: may include pain, reddening, swelling, and blistering.
Respiratory irritation: may include coughing and difficulty breathing.
Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.
CARCINOGENICITY:
Prolonged or repeated skin contact with this material may cause cancer based on animal data. Risk of cancer depends on duration and level of exposure. See Section 11 for additional information.

Whole diesel engine exhaust was reviewed by the International Agency for Research on Cancer (IARC) in their Monograph 46 (1989). Evidence for causing cancer was considered sufficient in animals and limited in humans. IARC placed diesel exhaust in category 2A, considering it probably carcinogenic to humans.

Diesel exhaust is known to the State of California to cause cancer.

4. FIRST AID MEASURES

EYE:
No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, if worn, and flush eyes with water.
SKIN:
Wash skin immediately with soap and water and remove contaminated clothing and shoes. Get medical attention if irritation persists. Discard contaminated clothing and shoes or thoroughly clean before reuse.
INGESTION:
If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.
INHALATION:
Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms continue.
NOTE TO PHYSICIANS:
Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Combustible liquid. See section 7 for appropriate handling and storage conditions.
FLAMMABLE PROPERTIES:
FLASH POINT: (P-M) 125F (52C) Minimum
AUTOIGNITION: 494F (257C) NFPA 325M, FO #2
FLAMMABILITY LIMITS (% by volume in air): Lower: 0.6 Upper: 4.7
EXTINGUISHING MEDIA:

CO2, Dry Chemical, AFFF Foam.
NFPA RATINGS: Health 0; Flammability 2; Reactivity 0.
FIRE FIGHTING INSTRUCTIONS:
Use water spray to cool fire-exposed containers and to protect personnel. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
COMBUSTION PRODUCTS:
Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887
International Collect Calls Accepted
ACCIDENTAL RELEASE MEASURES:
Eliminate all sources of ignition in the vicinity of the spill or released vapor.

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

Release of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems. U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85F.

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, "Flammable and Combustible Liquids", National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity", and/or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents".

Do not use or store near heat, sparks, or open flames. Use or store only in a well-ventilated area. Keep container closed when material is not in

use. Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of.

WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.

Do not taste or swallow. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS
If user operations generate airborne material, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

PERSONAL PROTECTIVE EQUIPMENT
EYE/FACE PROTECTION:
No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
SKIN PROTECTION:
No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Nitrile> <Viton> <Chlorinated Polyethylene (or Chlorosulfonated Polyethylene or CPE)> <Polyurethane>
RESPIRATORY PROTECTION:
If user operations generate harmful levels of airborne material that is not adequately controlled by ventilation, wear a NIOSH approved respirator that provides adequate protection. Use the following respirators: Organic Vapor.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Clear to pale yellow liquid if undyed, red liquid if dyed with a faint petroleum hydrocarbon odor.

pH:	NA
VAPOR PRESSURE:	0.4 kPa @ 40C (approximate)
VAPOR DENSITY (AIR=1):	>1
BOILING POINT:	176 - 370C (348-698F)
FREEZING POINT:	NA

MELTING POINT: NA
SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.
SPECIFIC GRAVITY: 0.84 @ 15.6/15.6C (typical)
VISCOSITY: 1.9 - 4.1 cSt @ 40C

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
None known
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
See section 7.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
Minimal effects clearing in less than 24 hours.
SKIN EFFECTS:
Moderate irritation at 72 hours. (Moderate erythema). The acute dermal LD50 in rabbits is >5 ml/kg. This material did not cause skin sensitization reactions in a Buehler guinea pig test.
ACUTE ORAL EFFECTS:
The acute oral LD50 in rats is > 5 ml/kg.
ACUTE INHALATION EFFECTS:
The 4-hour inhalation LC50 in rats is > 5 mg/l.

The data above is obtained from studies sponsored by the American Petroleum Institute.
CHRONIC EFFECTS/CARCINOGENICITY:
This product may contain significant amounts of polynuclear aromatic hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing of mists or vapors should be reduced to a minimum.

This product contains kerosene. CONCAWE (product dossier 94/106) has summarized current health, safety and environmental data available for a number of kerosenes (typically straight-run kerosene, CAS 8008-20-6, or hydrodesulfurized kerosene, CAS 64742-81-0). Following acute exposure to kerosene, signs observed in rats and rabbits were of a low order of toxicity: central nervous system depression occurred following oral exposure, skin irritation (ranging from slight to severe irritation) occurred with dermal exposure, and respiratory tract irritation occurred with inhalation exposure. None of the kerosenes tested produced more than slight eye irritation and none were skin sensitizers. However, intratracheal administration or artificial aspiration of small volumes (0.1 to 0.2 ml) of kerosene into the lungs of rats, chickens and primates resulted in lung damage and/or death. Chronic (3 to 24 months) mouse dermal toxicity studies of kerosenes and jet fuels produced mild to moderate skin irritation, while long-term (2+ years) studies showed moderate to severe skin damage as well as an increased incidence of tumors after long latency periods (probably due to a secondary mechanism related

to skin irritancy). In a study in which rats, mice, rabbits and cats were exposed to kerosene aerosol concentrations in the range 0.05 to 120 mg/l for up to four weeks, reductions in respiratory rate, pulmonary hyperaemia, leucocytosis, monocytosis and decreased erythrocyte sedimentation rate were observed, and histological examination revealed inflammatory changes in the respiratory tract (tracheitis, bronchitis and pneumonia).

Hydrodesulfurized kerosene was tested by the Petroleum Product Stewardship Council in a OECD Guideline 421 Reproductive/Developmental Toxicity Study. The kerosene sample was diluted to 494 (60%), 330 (40%), and 165 (20%) mg/kg/day in food grade mineral oil and applied daily during pre-mating and mating to day 19 of gestation. There was no apparent maternal, reproductive, or developmental toxicity at any dose. Males treated for eight weeks had increased relative kidney weights in the high dose group but no microscopic changes in testes or epididymides. No gross anomalies were observed in the pups.

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
A series of studies on the acute toxicity of 4 diesel fuel samples were conducted by one laboratory using water accommodated fractions. The range of effective (EC50) or lethal concentrations (LC50) expressed as loading rates were: The 96-hour LC50 for rainbow trout (Salmo gairdneri) is 21-210 mg/l. The 48-hour EC50 for daphnia (Daphnia magna) is 20-210 mg/l. The 72-hour EC50 in alga (Raphidocellus subcapitata) is 2.6-25 mg/l.
ENVIRONMENTAL FATE:
On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be "readily biodegradable". In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible.

13. DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by USEPA under RCRA (40CFR261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations.

Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: GAS OIL
DOT HAZARD CLASS: COMBUSTIBLE LIQUID
DOT IDENTIFICATION NUMBER: UN1202
DOT PACKING GROUP: III

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: YES
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12(b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8(d)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4(a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304	19=Chevron TWA	30=Chevron STEL
10=PA RTK	20=EPA Carcinogen	

The following components of this material are found on the regulatory lists indicated.

FUELS, DIESEL, NO. 2
is found on lists: 19,30,
KEROSINE
is found on lists: 02,10,11,

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows:
DIESEL FUEL
WHMIS CLASSIFICATION:
Class B, Division 3: Combustible Liquids
Class D, Division 2, Subdivision B: Toxic Material
-Skin or Eye Irritation

16. OTHER INFORMATION

NFPA RATINGS: Health 0; Flammability 2; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
This revision updates Sections 1, 5, & 9.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	TPQ	- Threshold Planning Quantity
RQ	- Reportable Quantity	PEL	- Permissible Exposure Limit
C	- Ceiling Limit	CAS	- Chemical Abstract Service Number
A1-5	- Appendix A Categories	()	- Change Has Been Proposed
NDA	- No Data Available	NA	- Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804

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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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APPENDIX C

Notification Checklist

NOTIFICATION CHECKLIST

In the event of a spill that leaves the facility grounds, the emergency coordinator will contact the following agencies, as appropriate, based on the location of the release, material and amount of release and the potential for contamination.

The **Hopewell Fire Department** can be contacted at 911. They should be contacted in cases where municipal support is required (fire, injuries, etc)

Date Called___/__/__ Time: ____ AM/PM
Person Contacted_____
Nature of Call_____

The **South Central Wastewater Authority Wastewater Treatment** facility can be contacted at (804) 861-0111. They should be contacted in cases where contamination has been discharged to the sanitary sewer.

Date Called___/__/__ Time: ____ AM/PM
Person Contacted_____
Nature of Call_____

The **Piedmont office of the Virginia Department of Environmental Quality** can be contacted at (804) 527-5020. They should be contacted in cases of environmental release.

Date Called___/__/__ Time: ____ AM/PM
Person Contacted_____
Nature of Call_____

The **National Response Center** can be contacted at (800) 424-8802. They should be contacted in cases of environmental release.

Date Called___/__/__ Time: ____ AM/PM
Person Contacted_____
Nature of Call_____

In the event of a major release that threatened to travel over sixty miles to Burdette, Virginia, through the Blackwater Swamp, onto the Blackwater river and threaten the City of Norfolk's water supply intake, the **City of Norfolk's water treatment** facility should be contacted at (757) 441-5678.

Date Called___/__/__ Time: ____ AM/PM
Person Contacted_____

Nature of Call_____

APPENDIX D

Oil Spill Equipment stored on site or available

b. Firefighting Equipment
- ABC-rated hand-held fire extinguishers are available in the maintenance garage and in the storage/loading area for fighting small, localized fires.

c. Personnel Protection Equipment
- Skin, eye, and respiratory protection equipment is stored in the emergency equipment locker and in the maintenance garage. The equipment includes:
- Full-face and half-face respirators with air purifying cartridges
- Tyvek suits, gloves, overboots
- Plastic eye goggles, face shields, etc.

d. Spill Containment Equipment
- A supply of absorbents (speedi-dri, 3M absorbent pads), shovels, buckets, salvage drums and other spill containment equipment is maintained in the emergency equipment locker and inside the maintenance garage.

e. Exit Signs
- All exits from the facility are clearly marked so that everyone in the facility during an emergency can quickly and safely find their way out of the facility. In addition, emergency evacuation routes are marked on the information cards posted next to each telephone.

CHESI will inspect and document the condition of emergency equipment as part of its routine facility inspection program. The equipment will be periodically tested and maintained as is necessary to ensure proper operation in time of an emergency.

5.2 Description of Equipment/Capability

A detailed list of the available onsite emergency equipment and a description of the capabilities of each piece of equipment is presented in Table 3.

CleanHarbors

Virginia Service Center (Hopewell/Richmond)
7515 Harvest Road
Prince George, VA 23875

24 Hr. # (804) 452-1800
24 Hr. # (800) 364-5939
Fax # (804) 452-1700

John DiCarlo, General Manager

Personnel authorized to release equipment/materials/manpower/etc.

Name			
John Dicarlo			
William Martin			
Mike Mayo			

EQUIPMENT LIST

Item Description	Location	Capacity/Size/Model	# of Units
(1) Marine Support Equipment			
15' Alumacraft Workboat	Prince George	With 15 hp Motor	1
15' Loweline	Prince George	15 ft	1
18' Loweline	Prince George	With 20 hp Motor	1
(2) Motor Vehicles			
High Powered Vacuum Loader	Prince George	Cusco - 3000 gal / 10 cu. yd.	1
Straight Vacuum Truck	Prince George	3000 gallon Brenner	2
Vacuum Trailer	Prince George	5000 gallon Brenner	1
Tractor	Prince George	Freightliner	2
Straight Box	Prince George	20' Ford	1
Pick-ups	Prince George	Rangers/CrewCab/F-250	7
20' ER Trailer	Prince George		1
Fork Lift	Prince George	6500 lbs capacity	1
Transporter	Prince George	7500 gal	1
Quick Response Trailer	Prince George		1
Bobcat Loader	Prince George		1
(3) Pumps and Pressure Equipment			
Trailer Mounted Skid Vac	Prince George	500 Gallon	1
Double Diaphragm Pump	Prince George	3" Pump (Wilden)	2
Double Diaphragm Pump	Prince George	2" Oil Pump (Wilden)	1
Double Diaphragm Pump	Prince George	2" Chemical Resistant	2
Double Diaphragm Pump	Prince George	1" Stainless Steel	3
Trash Pumps	Prince George	2"	1
Drum/Tank Pump	Prince George		1
Drum Vacuums	Prince George	Nortech	3
Pressure Washers	Prince George	3000 psi	4
(4) Generator/Compressors			
Air compressor	Prince George	185 CFM (Leroi)	1
Air Compressor	Prince George	185 CFM (Sullair)	2
Generator	Prince George	Homelite 4400	1
(5) Oil Spill Containment Boom			
Oil Containment Boom w/spill trailer	Prince George	American Marine 18"	1500'
Oil Containment Boom w/spill trailer	Prince George	American Marine 18"	1000'
Absorbent Boom, Sweep, Pads	Prince George	Assorted	

CleanHarbors

(6) Health and Safety Equipment			
Tripod Extraction Devises	Prince George	(DBI) w/harness	3
Full Face Respirators	Prince George	Assorted	8
Air Cartridges	Prince George	Assorted	
Personal Protective Clothing	Prince George	Barricade, Saranex, Poly-Tyvek	
Tank Truck Tripod	Prince George		1
Cyanide Antidote Kit	Prince George		1
HF Antidote Kit	Prince George		1
First Aid Kits	Prince George	Field Kits	
Nomex Coveralls	Prince George		8
(7) Chemical/Hazardous Response Equipment			
Level A Suits	Prince George	Butyl	3
SCBA	Prince George	4500 psi/2216 psi	4
SCBA Cylinders	Prince George	4500 psi	2
Escape Packs	Prince George	5 min (MSA)	5
Oxygen LEL Meters	Prince George	Passport 4 Gas	3
Oxygen LEL Meters	Prince George	Industrial Scientific	2
Vapor Meter	Prince George	Passport PID	2
Vapor Meter	Prince George	HNU	1
Drager Pumps	Prince George	With Misc. Tubes	2
Personal Monitoring Pumps	Prince George	SKC	2
PH Meter	Prince George		1
SAR 4-Man Manifold	Prince George	2,3,4 way manifolds	3
Hepa Vacuum	Prince George	(3 Backpacks)	4

Calibration and battery chargers are supplied for all meters.

(8) Hose			
3" Chemical Hose	Prince George		300'
2" Chemical Hose	Prince George		300'
4" Suction Hose	Prince George		100'
3" Suction Hose	Prince George		300'
2" Suction Hose	Prince George		300'
8" Vactor Pipe	Prince George		400'
6" Vactor Hose	Prince George		200'
4" Vactor Hose	Prince George		200'
Compressor Hose	Prince George		600'
Vent Hose	Prince George		100'
(9) Communications			
Motorola	Prince George	Two-Way Radios	2
Motorola	Prince George	Mobile	2
(10) Miscellaneous			
Anchors	Prince George		3
Line (rope)	Prince George		3000'
Life Vests	Prince George		30
Couplings and Hardware	Prince George	Assorted	
Pneumatic Nibbler	Prince George		1
Demolition Saw	Prince George		1
Chain Saw	Prince George		1
Portable Torches	Prince George		2
Explosion Proof Lights	Prince George		3
Electric Reciprocating Saw	Prince George		1
Pneumatic Drill	Prince George		2
Pneumatic Chipping Hammers	Prince George		2

(11) Field Personnel	**Position**
Jim Nardozzi	General Manager
John Dicarlo	Specialist

APPENDIX E

Trained Personnel Roster

CleanHarbors

Bob Creech	Coordinator
Mike Mayo	Supervisor
Paul Luck	Foreman Driver Class B
Jeff Fiacco	Foreman
Steve Baddorf	Foreman Driver Class A
William Martin	**Foreman**
Ben Walter	**Field Technician**
Cameron Patterson	**Field Technician**
Brian Field	**Field Technician**
Tom Field	**Field Technician**
Gorman Jarratt	**Field Technician**
Rob Richardson	**Field Technician**
Gary McClure	**Drive Class A**
Gerry Mayo	**Driver Class A**

All Personnel are 40-Hour OSHA trained

Emergency Response Sub-Contractors

Accurate Marine Equipment
5360 Robin Hood Road
Norfolk, VA 23513
(757) 855-6555

Lockwood Marine, Inc. (Tugs, Barges, Cranes)
220 Salters Creek Road
Hampton, VA 23669
(804) 722-1946 Office Phone
(804) 879-0693 Duty Phone

Godwin Pumps (Pumps)
3104 North Side Avenue
Richmond, VA 23228
(804) 266-3614

Baker Tanks (Frac Tanks, Sludge Boxes, Rolloffs)
938 East 4th Street
Richmond, VA 23224
(804) 233-9900

W.O. Grubb
2201 Elmhurst Lane
Portsmouth, VA 23701
(757) 465-4072

Onsite Environmental Staffing (Labor)
10900 Nuckols Road
Glen Allen, VA 23060
(804) 968-6070

Industrial Marine Services
1301 Marsh Street
Norfolk, VA 23523
(804) 543-5718

Hertz Equipment Rental (Heavy Equipment)
2219 Chamberlyne Avenue
Richmond, VA 23222
(804) 329-7440

Rain for Rent (Frac Tanks, Storage Tanks)
Hopewell, VA 23860
(800) 377-8662

APPENDIX F

Virginia Oil Discharge Contingency Plan Regulation

9 VAC 25-91-170

PART IV.
OIL DISCHARGE CONTINGENCY PLAN (ODCP) REQUIREMENTS.

9 VAC 25-91-170. Contingency plan requirements and approval.

A. Section 62.1-44.34:15 of the Code of Virginia requires that all facility oil discharge contingency plans shall provide for the use of the best available technology (economically feasible, proven effective and reliable and compatible with the safe operation of the facility) at the time the plan is submitted for approval and, in order to be approvable, shall contain, at a minimum, the following requirements:

1. The name of the facility, geographic location and access routes from land and water if applicable;

2. The names of the operators of the facility including address and phone number;

3. A physical description of the facility consisting of a plan of the facility which identifies the applicable oil storage areas, transfer locations, control stations, above and below ground oil transfer piping within the facility boundary (and including adjacent easements and leased property), monitoring systems, leak detection systems and location of any safety protection devices;

4. A copy of the material safety data sheet (MSDS) or its equivalent for each oil or groups of oil with similar characteristics stored, transferred or handled at the facility. To be equivalent, the submission shall contain the following:
a. Generic or chemical name of the oil;
b. Hazards involved in handling the oil; and
c. A list of fire-fighting procedures and extinguishing agents effective with fires involving each oil or groups of oil demonstrating similar hazardous properties which require the same fire-fighting procedures;

5. The maximum storage or handling capacity of the facility and the individual tank capacities or, in the case of a pipeline, the average daily throughput of oil;

6. A complete listing, including 24-hour phone numbers, of all federal, state and local agencies required to be notified in the event of a discharge;

7. The position title of the individuals responsible for making the required notifications and a copy of the notification check-off list;

8. The position title, address and phone number of the individuals authorized to act on behalf of the operator to implement containment and cleanup actions. This individual shall be available on a 24-hour basis to ensure the appropriate containment and cleanup actions are initiated;

9. The position title of the individuals designated by the operator to ensure compliance during containment and cleanup of a discharge with applicable federal, state and local requirements for disposal of both solid and liquid wastes;

10. Identification and ensurance by contract or other means acceptable to the board of the availability of private personnel and equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge. This contract or agreement shall ensure a certain response within the shortest feasible time. The board will accept a letter of understanding between the operator and the response contractors which attests to this capability being readily available. Membership in a cleanup cooperative or other response organization is also acceptable. A listing of contractor or cooperative capabilities, including an inventory of the equipment and specification of the other information required by subdivision 12 of this subsection (i.e., 9 VAC 25-91-170 A 12), shall be included unless these capabilities are already on file with the board;

11. Assessment of the worst case discharge, including measures to limit the outflow of oil, response strategy and operational plan. For the purpose of this chapter, the worst case discharge is the instantaneous release of the volume of the largest tank on the facility (125% of the volume of the largest tank for facilities with multiple tanks within a single containment dike) during adverse weather conditions. Facilities shall take into consideration that due to hydraulic pressure of the release, the secondary containment will not contain this volume in its entirety. The worst case discharge for a pipeline shall be based upon the volume of a discharge calculated using the maximum pressure, velocity, and elevation, and the largest pipe size and pipeline location. If facility design and operation indicates that this worst case discharge scenario does not meet the intent of this chapter, the board may require submission of other worst case scenarios on a facility specific basis;

12. Inventory of facility containment equipment, including specification of quantity, type, location, time limits for gaining access to the equipment, and identification of facility personnel trained in its use;

13. Identification and location of natural resources at risk (including, but not limited to, surface waters as indicated on the applicable USGS quadrangle maps, groundwater, public water supplies, public and private water wells and springs, state or federal wildlife management areas, wildlife refuges, management areas, sanctuaries, property listed on the National Register of Historic Places and property listed on the National Register of Natural Landmarks), priorities for protection and means of protecting these resources;
a. In addition to the requirements set forth in this subdivision, the operator of a facility with an aggregate aboveground storage or handling capacity of one million gallons or greater of oil shall conduct a groundwater characterization study (GCS) within the geographic boundaries of the facility to be submitted as part of the contingency plan. The operator of such a facility shall utilize upgradient and downgradient GCS monitoring wells to satisfy this requirement. At the time of a discharge, the operator of such a facility shall conduct further characterization of

the groundwater as required by the board;
b. For purposes of satisfying the requirement to identify and locate natural resources at risk, the operator of a pipeline shall identify surface waters as indicated on the applicable USGS quadrangle maps, public water supplies, state or federal wildlife management areas, wildlife refuges, management areas, sanctuaries, property listed on the National Register of Historic Places and property listed on the National Register of Natural Landmarks which could reasonably be expected to be impacted by the discharge. At the time of a discharge, the operator of a pipeline shall conduct a complete groundwater characterization study as required by the board and identify other natural resources at risk including public and private wells or springs which could reasonably be expected to be impacted by the discharge;

14. Identification and location of any municipal or other services (including, but not limited to, storm drains, storm water collection systems and sanitary sewer systems) at risk, notification procedures applicable and means of protection of these services. The identification and location of all municipal services shall include those services for which official records are available. The operator of a pipeline shall determine which sections of the system are located in areas that would require an immediate response by the operator to prevent hazards to the public if a discharge occurred;

15. If applicable, the facility's responsibility for responding to a discharge from a vessel moored at the facility and the identity of the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously;

16. A description of training, equipment testing, and periodic unannounced oil discharge drills conducted by the operator to mitigate or prevent the discharge or the substantial threat of a discharge;

17. The facility's oil inventory control procedures. Facilities shall ensure that this control procedure is capable of providing for the detection of a discharge of oil within the shortest feasible time in accordance with recognized engineering practices and industry measurement standards;

18. A detailed description of a system for early detection of a discharge to groundwater, utilizing up-gradient and down-gradient leak detection monitoring wells or other groundwater protection measures acceptable to the board (i.e., visual, interstitial, vapor and leak detection groundwater monitoring wells). The system will be operated, maintained and monitored in the manner approved and be subject to inspection by the department under the pollution prevention requirements of Part III (9 VAC 25-91-130 *et seq.*, Pollution Prevention Requirements) of this chapter. Operators subject to subdivision 13 a of this subsection (i.e., 9 VAC 25-91-170 A 13 a), may utilize such GCS wells to meet this requirement when approved by the board;

19. The procedures to be followed, upon detection of a discharge of oil, for testing and inspection of all tanks, piping and all oil transfer associated equipment that could

reasonably be expected to be a point source for the discharge. These procedures shall be conducted within the shortest feasible time, include a progression of written procedures from visual inspection to formal testing and be conducted in accordance with recognized engineering practices;

20. The facility's preventive maintenance procedures applicable to the critical equipment of an oil storage and transfer system as well as the maximum pressure for each oil transfer system. The term "critical equipment" shall mean equipment that affects the safe operation of an oil storage and handling system;

tank/pipe testing required every 5 years.

21. A description of the security procedures used by facility personnel to avoid intentional or unintentional damage to the facility; and

22. A post-discharge review procedure to assess the discharge response in its entirety.

B. All nonexempt facility operators shall file with the board the application form for approval of the contingency plan. This form shall be submitted with the required contingency plan and shall be completed insofar as it pertains to the facility. The operator shall sign and date the certification statement on the application form. If the operator is a corporation, the form shall be signed by an authorized corporate official; if the operator is a municipality, state, federal or other public agency, the form shall be signed by an authorized executive officer or ranking elected official; if the operator is a partnership or sole proprietorship, the form shall be signed by a general partner or the sole proprietor. All forms shall be acknowledged before a Notary Public.

C. Contingency plans shall be filed with and approved by the board. The plan shall be submitted to the board at the address specified in 9 VAC 25-91-60 A. A copy of the original with the facility-specific information and the approval letter shall be retained at the facility and shall be readily available for inspection.

D. An operator of multiple facilities may submit a single contingency plan encompassing more than one facility if the facilities are located within the defined boundaries of the same city or county or if the facilities are similar in design and operation. The plan shall contain site-specific information as required by subsection A of this section for each facility. The site-specific information shall be placed in appendices to the plan. Upon renewal of an approved contingency plan submitted under this subsection, the board shall consider the individual facilities subject to all provisions of subsections E through J of this section.

E. Oil discharge contingency plans shall be reviewed, updated if necessary and resubmitted to the board for approval every 60 months from the date of approval unless significant changes occur sooner. Operators shall notify the board of significant changes and make appropriate amendments to the contingency plan within 30 days of the occurrence. For the purpose of this chapter, a significant change includes the following:
1. A change of operator of the facility;

2. An increase in the maximum storage or handling capacity of the facility that would change the measures to limit the outflow of oil, response strategy or operational plan in the event of the worst case discharge;
3. A decrease in the availability of private personnel or equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge;
4. A change in the type of product dealt in, stored or handled by any facility covered by the plan for which a MSDS or its equivalent has not been submitted as part of the plan; or
5. A change in the method or operation utilized for the early detection of a discharge to groundwater (i.e., change in a method of leak detection).

F. Updated plans or certification for renewal of an existing plan shall be submitted to the board for review and approval not less than 90 days prior to expiration of approval of the current plan. Submittal of the certification for renewal for an existing plan shall be made in accordance with the provisions of subsection B of this section. All notifications of changes, renewals, submissions and updates of plans required by this chapter shall be directed to the respective regional office.

G. An oil discharge exercise may be required by the board to demonstrate the facility's ability to implement the contingency plan. The board will consult with the operator of the facility prior to initiating an exercise. Where appropriate, the board will ensure coordination with federal agencies prior to initiation of an exercise.

H. The board may, after notice and opportunity for a conference pursuant to § 9-6.14:11 of the Code of Virginia, deny or modify its approval of an oil discharge contingency plan if it determines that:
1. The plan as submitted fails to provide sufficient information for the board to process, review and evaluate the plan or fails to ensure the applicant can take such steps as are necessary to protect environmentally sensitive areas, to respond to the threat of a discharge, and to contain and clean up an oil discharge within the shortest feasible time;
2. A significant change has occurred in the operation of the facility covered by the plan;
3. The facility's discharge experience or its inability to implement its plan in an oil spill discharge exercise demonstrates a necessity for modification; or
4. There has been a significant change in the best available technology since the plan was approved.

I. The board, after notice and opportunity for hearing, may revoke its approval of an oil discharge contingency plan if it determines that:
1. Approval was obtained by fraud or misrepresentation;
2. The plan cannot be implemented as approved;
3. A term or condition of approval of this chapter has been violated; or
4. The facility is no longer in operation.

J. A Facility Response Plan (FRP) developed pursuant to § 4202 of the federal Oil Pollution Act of 1990, Pub. L. No. 101-380, 33 USCA § 2716 (1996), may be accepted as meeting the requirements of subdivisions A 1 through A 22 of this section. The operator

shall submit a copy of the FRP and a copy of the currently valid FRP approval letter for the facility for review and approval by the board. The FRP shall contain a cross reference in order to index pages for the specific requirements of the ODCP. The FRP shall also contain the satisfaction of the requirements of subdivisions A 13 a and A 18 of this section. This information shall be resubmitted in accordance with the renewal period established by federal statute or regulation but in no instance shall the renewal period exceed five years. The board shall be notified of any plan amendments.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

PIEDMONT REGIONAL OFFICE
4949-A Cox Road
Glen Allen, Virginia 23060
(804) 527-5020
Fax (804) 527-5106
www.deq.state.va.us

Robert G. Burnley
Director

Gerard Seeley, Jr.
Piedmont Regional Director

JUN 02 2003

Mr. Gary Young
Operations Manager
Clean Harbors Environmental Services, Inc.
7515 Harvest Rd.
Prince George, VA 23875

Re: Approval of Oil Discharge Contingency Plan, FC-04-3737
Clean Harbors Environmental Services, Inc.

Dear Mr. Young:

This letter serves as approval of the Oil Discharge Contingency Plan (ODCP) renewal submitted and reviewed according to 9 VAC 25-91-10 *et. seq.* for the following facility:

Clean Harbors Environmental Services, Inc.

The approval is effective until the expiration of the current plan on May 10, 2008. Updated plans shall be submitted for review and approval not less than 90 days prior to this expiration date. All notifications of changes, submissions and updates of the plan required by the referenced regulation shall be directed to the Virginia Department of Environmental Quality, Piedmont Regional Office, P.O. Box 6030 Glen Allen, Virginia 23058.

Be advised that in the event of an oil discharge, the facility operator must immediately implement all applicable provisions of the plan as well as all relevant requirements of Article 11 of the State Water Control Law (Section 62.1-44.34: 14-23).

Please feel free to contact A.C. Ray at (804) 527-5049 if you have any questions concerning this matter.

Sincerely,

Regional Director
Piedmont Regional Office

Enclosure

cc: File

SUBJECT: Oil Discharge Contingency Plan Appr

TO: Director

FROM: A. C. Ray, AST/UST Regional Program

DATE: May 27, 2003

COPIES: OSRR, Gary Hall

Facility Name:	Clean Harbors Inc.
Facility Identification Number:	FC-04-3737
Facility Contact:	Gary K. Hall
Facility Location:	7515 Harvest R Petersburg, VA
ODCP Receipt Date:	October 29, 20
Facility Description:	The facility i plant, which r contaminated o non-hazardous facility recei materials cont and other subs tanker trailer means. The fa the largest ta and an aggrega gallons. Seco capable of con the largest ta
Facility Inspection Date:	November 19, 2
Leak Detection Type:	Consists of vi

Staff Comments: The staff believes that **Clean Harbors Environmental Services, Inc.**, has complied with the requirements of 9 VAC 25-91-170.

STAFF RECOMMENDATIONS:

The staff recommends that the Director:

1. Approve the referenced Oil Discharge Contingency Plan.

APPROVED: _____
for the Director

DATE: 5/28/03

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET • P.O. BOX 859048 • BRAINTREE, MA 02185-9048
(781) 849-1800
Visit our Website at www.cleanharbors.com

CERTIFIED MAIL - RETURN RECEIPT REQUESTED (70011940000427889732)

November 15, 2002

Department of Environmental Quality
Office of Financial Management
P.O. Box 10150
Richmond, VA 23240

Re: Aboveground Storage Tank Registration Renewal
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, VA 23875

Dear Sir or Madam:

Clean Harbors Environmental Services, Inc. (CHESI) operates a waste oil storage facility at the address referenced above. CHESI utilizes three (3) aboveground storage tanks at the facility which are subject to the registration requirements of Virginia regulation 9 VAC 25-91-10 et seq.

Please find enclosed a completed registration renewal form (Form 7541-AST), as well as completed registration forms (Form 7540-AST) for each of the three (3) aboveground storage tanks: two (2) of which hold used oil, and one (1) of which holds virgin heating fuel. Also enclosed is the registration fee of $50.00, in the form of a check made payable to the Treasurer of Virginia. As required by 9 VAC 25-91-100, copies of the registration forms have been forwarded to the Prince George Local Emergency Planning Committee.

Please note that the tank identification numbers have changed since the previous registration was submitted. Tank 6 has changed to Tank 4, Tank 7 has changed to Tank 5, and Tank 9 has changed to Tank 8.

An Oil Discharge Contingency Plan for the facility was submitted to the Virginia Department of Environmental Quality for review and approval on November 5, 2002.

If you have any questions regarding this submittal, or if additional information is required, please contact me at 781-849-1800 extension 4142.

Sincerely,

Wallace M Bell

Wallace M. Bell
Corporate Compliance Manager

Enclosures: Form 7541-AST (1), Form-7540 (3), check

cc w/ enclosures (except check): Mr. Gary Young, CHESI
Mr. Gilbert Lee, Prince George LEPC
Cert. Mail (70011940000427889749)

FORM 7541-AST

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

REGISTRATION RENEWAL FOR ABOVEGROUND STORAGE TANK (AST) FACILITY

State use only: FAC ID

I. OWNERSHIP OF FACILITY:

Owner Name (First, Middle, Last): Clean Harbors Env. Service

Street Address: 7515 Harvest Road

City: Prince George

County: Prince George

State: VA | Zip Code (+4): 23875 | (Area code): 804 | Phone number: 452-1818

II. OPERATOR OF FACILITY:

Operator Name (First, Middle, Last): Clean Harbors Env. Service

Street Address: 7515 Harvest Road

City: Prince George

County: Prince George

State: VA | Zip Code (+4): 23875 | (Area code): 804 | Phone number: 452-1818

III. CONTACT PERSON FOR FACILITY:

Contact Name (First, Middle, Last): Gary Young

Street Address: 7515 Harvest Road

City: Prince George

County: Prince George

State: VA | Zip Code (+4): 23875 | (Area code): 804 | Phone number: 452-1818

Errors on this page

Item V should read 3, not 4.

Item VI should read 24,600, not 39,600

IV. LOCATION OF FACILITY:

Latitude: 0 3 7 1 5 2 3 N

Longitude: 0 7 7 1 6 0 1 W

Facility Name or Company Site Identifier: Clean Harbors Env. Service

Street Address: 7515 Harvest Road

City: Prince George

County: Prince George

State: VA

Zip Code (+4): 23875

(Area code): 804

Phone number: 452 1818

V. TOTAL NUMBER OF REGISTERED ASTs AT FACILITY: - , - - 4

VI. TOTAL AST STORAGE CAPACITY OF FACILITY: (In gallons) - - , - 39 , 600

VII. OIL DISCHARGE CONTINGENCY PLAN NUMBER: ODCP currently under review by VA DEO

(Applies only to AST Facilities 25,000 gallons or greater) - -

VIII. RENEWAL FEE: (Required every 5 years from date of registration.)

RENEWAL FEE IS ENCLOSED: 1. Yes ● 2. No ○ (Make check payable to Treasurer of Virginia.)

Registration Renewal forms will not be accepted by the board as complete unless the applicable fee has been paid. No fee is required for a "modification" of an AST registration (i.e. relocation or repositioning of an existing AST), upgrade, repair, or closure.

Registration Renewal fees are as follows:

a. An individual AST (new, existing, replaced or brought back into use after permanent closure) = $25;
b. One facility with one AST = $25;
c. One facility with two or more ASTs = $50;
d. Two facilities with one AST at each facility = $50;
e. Two facilities with one AST at the first facility and two or more at the other = $75;
f. Two or more facilities with two or more ASTs each = $100;
g. Three facilities with one AST each = $75; or
h. Three facilities with two or more ASTs at the first facility and one AST at each other facility = $100.

IX. ALL OTHER INFORMATION ON THE PREVIOUSLY SUBMITTED REGISTRATION FORM (7540-AST) REMAINS CORRECT: 1. Yes ○ 2. No ●

X. IF ANY OTHER INFORMATION ON THE PREVIOUSLY SUBMITTED REGISTRATION FORM (7540-AST) HAS CHANGED, AN AMENDED REGISTRATION FORM (7540-AST) MUST BE ENCLOSED.

XI. OWNER CERTIFICATION: (Read and sign after completing all sections of this registration renewal.)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

Signature: [signature]

********** Mail form and fee to: **********

Department of Environmental Quality, Office of Financial Management
P.O. Box 10150,
Richmond, VA 23240

Don't need to register Tank 101 because it's no longer being used.

33345

STATE USE ONLY FAC ID [ ] - [ ]

DEQ Form 7540-AST: REGISTRATION FOR ABOVEGROUND STORAGE TANK(S)

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

XII. DESCRIPTION OF ABOVEGROUND TANKS: (Fill in all that apply)

A. OWNER'S TANK IDENTIFICATION NUMBER: (Example: 00001); no comma) 000004

B. TANK STATUS:

1. ○ New Installation
2. ○ Currently in Use
3. ○ Upgrade
4. ○ Repaired
5. ○ Converted
6. ○ Replacement
7. ○ Change in Service
8. ○ Temporarily Out of Use
9. ○ Permanently Out of Use

C. INSTALLATION DATE (MMDDYY): 050195

D. TOTAL STORAGE CAPACITY OF TANK (in gallons): 00009800

E. TANK MATERIAL OF CONSTRUCTION:

1. ● Painted Bare Single-walled Steel
2. ○ Cathodically Protected Steel
3. ○ Composite(Steel w/Fiberglass)
4. ○ Fiberglass Reinforced Plastic
5. ○ Insulated/Tank Jacket
6. ○ Lined Interior
7. ○ Double-Walled
8. ○ Double Bottomed
9. ○ Concrete
10. ○ Excavation Liner
11. ○ Epoxy Coated Steel (Internal)
12. ○ Epoxy Coated Steel (External)
13. ○ Unknown
14. ○ Other (Specify on Page 9)

F. FOUNDATION CONSTRUCTION MATERIAL:

1. ○ Earthen Material
2. ○ Concrete with Impermeable Material
3. ○ Steel
4. ● Concrete without Impermeable Material
5. ○ Unknown
6. ○ Other

G. ROOF CONSTRUCTION TYPE:

1. ○ Floating Roof
2. ○ Bolted Steel Cone Roof
3. ○ Breather Roof
4. ○ Double Deck Roof
5. ○ Pontoon Roof
6. ○ Balloon Roof
7. ○ Lifter Roof
8. ○ Fan Roof
9. ● Other (Specify on Page 9)

H. PIPING TYPE:

1. ○ Below Ground Pipes
2. ● Above Ground Pipes
3. ○ Both

I. PIPING CONSTRUCTION MATERIAL:

1. ● Bare Steel
2. ○ Galvanized Steel
3. ○ Copper
4. ○ Fiberglass Reinforced Plastic
5. ○ Double-walled
6. ○ Secondary Containment
7. ○ Unknown
8. ○ Other (Specify on Page 9)

J. TANK CATHODIC PROTECTION:

1. ● None
2. ○ Sacrificial Anode(s)
3. ○ Impressed Current

Tank 4

33346

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

K. TANK CONTAINMENT AND/OR DIVERSIONARY STRUCTURES OR EQUIPMENT (Fill in all circles that apply)

1. ○ Curbing
2. ○ Weirs and/or Booms
3. ○ Sorbent Materials
4. ○ Culverts and/or Gutters
5. ○ Spill Diversion Ponds
6. ○ Retention Ponds
7. ● Dikes/Berms/Retaining Walls
8. ○ Unknown
9. ○ Other (Specify on Page 9)

L. RELEASE PREVENTION BARRIERS:

1. ○ Double Bottom
2. ○ Double-walled
3. ○ Lined Interior
4. ○ Polyethylene Jacket
5. ○ Excavation Liner
6. ● None
7. ○ Unknown
8. ○ Other (Specify on Page 9)

M. RELEASE DETECTION METHOD:

1. ○ Groundwater Monitoring
2. ● Visual Monitoring
3. ○ Vapor Monitoring
4. ○ Interstitial Monitoring
5. ○ None
6. ○ Other (Specify on Page 9)

N. TANK SAFE FILL AND SHUTDOWN PROCEDURES:

1. Does tank have a gauge measuring liquid level of tank?

   a. ● Yes b. ○ No

2. Date gauge was last calibrated: (MMDDYY) 0 4 0 1 9 7

3. High level alarmed installed?

   a. ● Yes b. ○ No

4. Type of high level alarm:

   a. ○ Visual b. ● Audible c. ○ Both

O. AST AND FACILITY INSPECTIONS:

(N/A = Not applicable; N/C = Not conducted; Unk = Unknown; Date = Date inspected)

Information Requested	N/A	N/C	Unk	Date (MMDDYY)
1. Last cathodic protection evaluation for AST.	○	●	○	
2. Last formal external tank inspection.	○	○	○	0 1 2 4 9 7
3. Last formal external tank re-inspection.	○	○	○	0 1 2 4 9 7
4. Last formal internal tank inspection.	○	●	○	
5. Last formal internal tank re-inspection.	○	●	○	

Tank 4

29348

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

	N/A	N/C	Unk	Date (MMDDYY)
6. Last hydrostatic testing for piping.	○	●	○	
7. Last corrosion protection for aboveground piping.	○	●	○	
8. Last cathodic protection for underground piping.	●	○	○	
9. Last berm or dike evaluation or certification by a professional engineer.	○	○	○	012397

10. Has AST had any major repairs or alterations? If yes, specify on page 9.
a. ○ Yes b. ● No

P. SUBSTANCE CURRENTLY OR LAST STORED IN TANK:

1. ○ Gasoline
2. ○ Diesel Fuel
3. ○ Gasohol
4. ○ Heating Oil
5. ○ Fuel Oil
6. ○ Kerosene
7. ● Used Oil
8. ○ Lubricating Oil
9. ○ Bunker "C"
10. ○ Jet Fuel
11. ○ Aviation Gasoline
12. ○ Other (Specify on Page 9)

Q. TEMPORARY OR PERMANENT TANK CLOSURES: (Not Applicable)

1. Type:
a. ○ Temporary closure b. ○ Permanent closure

2. Date tank was last used (MMDDYY)
a. ○ Unknown b.

3. Date tank was last closed (MMDDYY)
a. ○ Unknown b.

4. Has a site assessment been completed?
a. ○ Yes b. ○ No

5. Has a permit and required inspection been obtained?
a. ○ Yes b. ○ No

6. If temporary closure, has an extension of the 12 month temporary period been requested?
a. ○ Yes b. ○ No c. ○ Not Applicable

Tank 4

22345

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

	Yes	No
7. Was tank dismantled?	○ 7a	○ 7b
8. Was piping dismantled?	○ 8a	○ 8b
9. Was tank closed in place?	○ 9a	○ 9b
10. Was piping closed in place?	○ 10a	○ 10b
11. Was closure approved by local building official inspector?	○ 11a	○ 11b
12. Was evidence of leak detected?	○ 12a	○ 12b
13. Was closure assessment completed?	○ 13a	○ 13b

Section "Q" is not complete without the following information attached:

1. ○ Copies of laboratory results of sample(s) and test(s) for oil / petroleum hydrocarbons.
2. ○ Description of area sampled.
3. ○ Photographs indicating sampled area.
4. ○ Site map indicating location of closed AST and associated piping.
5. ○ Copy of local code permit.

XIII. COMPLIANCE CERTIFICATION: (Complete for all new and upgraded tanks at this location) (Not Applicable)

A. OWNER'S TANK IDENTIFICATION NUMBER: (example: 000001; no commas)

B. Installer certified by tank and piping manufacturers?

1. ○ Yes 2. ○ No

C. Installation inspected by registered engineer?

1. ○ Yes 2. ○ No

D. Installation completed to which standard?

1. ○ API 650
2. ○ UL 142
3. ○ API 620
4. ○ Other (Specify on Page 9)

E. Manufacturer's installation checklist(s) have been completed?

1. ○ Yes 2. ○ No

F. "Certificate of Use" issued by local permitting official?

1. ○ Yes 2. ○ No

Tank 4

30208

STATE USE ONLY FAC ID

DEQ Form 7540-AST: REGISTRATION FOR ABOVEGROUND STORAGE TANK(S) Page: 9

TANK INFORMATION

XIII. (continued) (Complete all tank sheets for each tank at this location)

G. CATH: *I certify the information concerning installation that is provided in section XIII is true to the best of my belief and knowledge.*

Installer Name: _____

Company Name: _____

Installer Position: _____

Signature: _____ Date: _____

XIV. OWNER CERTIFICATION (Read and sign after completing all sections of this registration/notification.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.
(To be signed by either the owner or the owner's authorized representative).

Name and official title of owner: _____

Signature: _____ Date: _____

Name and official title of owner's authorized representative:

Scott Day - Manager, Oil Division

Signature: _____ Date: 11-15-02

USE THIS SPACE TO SPECIFY "OTHER" INFORMATION OF FORM: (Use additional sheets as needed)

VII. C.
VIII. S. Waste Oil Storage Facility
X. S.
XI. B.
XII. E.
XII. F.
XII. G. Welded Steel
XII. I.
XII. K.
XII. L.
XII. M.
XII. O.
XII. P.
XII. D.

ADDITIONAL COMMENTS: _____

25345

STATE USE ONLY FAC ID [ ] - [ ]

DEQ Form 7540-AST: REGISTRATION FOR ABOVEGROUND STORAGE TANK(S) Page: 5

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

XII. DESCRIPTION OF ABOVEGROUND TANKS: (Fill in all that apply)

A. OWNER'S TANK IDENTIFICATION NUMBER: (Example: 000001; no commas) 000005

B. TANK STATUS:

1. ○ New Installation
2. ● Currently in Use
3. ○ Upgrade
4. ○ Repaired
5. ○ Converted
6. ○ Replacement
7. ○ Change in Service
8. ○ Temporarily Out of Use
9. ○ Permanently Out of Use

C. INSTALLATION DATE (MMDDYY): 050195

D. TOTAL STORAGE CAPACITY OF TANK (in gallons) 00009800

E. TANK MATERIAL OF CONSTRUCTION:

1. ● Painted/Bare Single-walled Steel
2. ○ Cathodically Protected Steel
3. ○ Composite(Steel w/Fiberglass)
4. ○ Fiberglass Reinforced Plastic
5. ○ Insulated/Tank Jacket
6. ○ Lined Interior
7. ○ Double-Walled
8. ○ Double Bottomed
9. ○ Concrete
10. ○ Excavation Liner
11. ○ Epoxy Coated Steel (Internal)
12. ○ Epoxy Coated Steel (External)
13. ○ Unknown
14. ○ Other (Specify on Page 9)

F. FOUNDATION CONSTRUCTION MATERIAL:

1. ○ Earthen Material
2. ○ Concrete with Impermeable Material
3. ○ Steel
4. ● Concrete without Impermeable Material
5. ○ Unknown
6. ○ Other

G. ROOF CONSTRUCTION TYPE:

1. ○ Floating Roof
2. ○ Bolted Steel Cone Roof
3. ○ Breather Roof
4. ○ Double Deck Roof
5. ○ Pontoon Roof
6. ○ Balloon Roof
7. ○ Lifter Roof
8. ○ Pan Roof
9. ● Other (Specify on Page 9)

H. PIPING TYPE:

1. ○ Below Ground Pipes
2. ● Above Ground Pipes
3. ○ Both

I. PIPING CONSTRUCTION MATERIAL:

1. ● Bare Steel
2. ○ Galvanized Steel
3. ○ Copper
4. ○ Fiberglass Reinforced Plastic
5. ○ Double-walled
6. ○ Secondary Containment
7. ○ Unknown
8. ○ Other (Specify on Page 9)

J. TANK CATHODIC PROTECTION:

1. ● None
2. ○ Sacrificial Anode(s)
3. ○ Impressed Current

Tank 5

23345

DEQ Form 7240-AST: REGISTRATION FOR ABOVEGROUND STORAGE TANK(S)

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

K. TANK CONTAINMENT AND/OR DIVERSIONARY STRUCTURES OR EQUIPMENT: (Fill in all circles that apply)

1. ○ Curbing
2. ○ Weirs and/or Berms
3. ○ Sorbent Materials
4. ○ Culverts and/or Gutters
5. ○ Spill Diversion Ponds
6. ○ Retention Ponds
7. ● Dikes/Berms/Retaining Walls
8. ○ Unknown
9. ○ Other (Specify on Page 9)

L. RELEASE PREVENTION BARRIERS:

1. ○ Double Bottom
2. ○ Double-walled
3. ○ Lined Interior
4. ○ Polyethylene Jacket
5. ○ Excavation Liner
6. ● None
7. ○ Unknown
8. ○ Other (Specify on Page 9)

M. RELEASE DETECTION METHOD:

1. ○ Groundwater Monitoring
2. ● Visual Monitoring
3. ○ Vapor Monitoring
4. ○ Internal Monitoring
5. ○ None
6. ○ Other (Specify on Page 9)

N. TANK SAFE FILL AND SHUTDOWN PROCEDURES:

1. Does tank have a gauge measuring liquid level of tank?

   a. ● Yes b. ○ No

2. Date gauge was last calibrated: (MMDDYY) 040197

3. High level alarmed installed?

   a. ● Yes b. ○ No

4. Type of high level alarm:

   a. ○ Visual b. ● Audible c. ○ Both

O. AST AND FACILITY INSPECTIONS:

(N/A = Not applicable; N/C = Not conducted; Unk = Unknown; Date = Date inspected)

Information Requested	N/A	N/C	Unk	Date (MMDDYY)
1. Last cathodic protection evaluation for AST.	○	●	○	
2. Last formal external tank inspection.	○	○	○	012497
3. Last formal external tank re-inspection.	○	○	○	012497
4. Last formal internal tank inspection.	○	●	○	
5. Last formal internal tank re-inspection.	○	●	○	

Tank 5

23343

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

	N/A	N/C	Unk	Date (MMDDYY)
6. Last hydrostatic testing for piping.	○	●	○	
7. Last corrosion protection for aboveground piping.	○	●	○	
8. Last cathodic protection for underground piping.	●	○	○	
9. Last berm or dike evaluation or certification by a professional engineer.	○	○	○	012397

10. Has AST had any major repairs or alterations? If yes, specify on page 9.
a. ○ Yes b. ● No

P. SUBSTANCE CURRENTLY OR LAST STORED IN TANK:

1. ○ Gasoline
2. ○ Diesel Fuel
3. ○ Gasohol
4. ○ Heating Oil
5. ○ Fuel Oil
6. ○ Kerosene
7. ● Used Oil
8. ○ Lubricating Oil
9. ○ Bunker "C"
10. ○ Jet Fuel
11. ○ Aviation Gasoline
12. ○ Other (Specify on Page 9)

Q. TEMPORARY OR PERMANENT TANK CLOSURES: (Not Applicable)

1. Type:
a. ○ Temporary closure b. ○ Permanent closure

2. Date tank was last used (MMDDYY)
a. ○ Unknown b.

3. Date tank was last closed (MMDDYY)
a. ○ Unknown b.

4. Has a site assessment been completed?
a. ○ Yes b. ○ No

5. Has a permit and required inspection been obtained?
a. ○ Yes b. ○ No

6. If temporary closure, has an extension of the 12 month temporary period been requested?
a. ○ Yes b. ○ No c. ○ Not Applicable

Tank 5

25345

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

	Yes	No
7. Was tank dismantled?	○ 7a	○ 7b
8. Was piping dismantled?	○ 8a	○ 8b
9. Was tank closed in place?	○ 9a	○ 9b
10. Was piping closed in place?	○ 10a	○ 10b
11. Was closure approved by local building official inspector?	○ 11a	○ 11b
12. Was evidence of leak detected?	○ 12a	○ 12b
13. Was closure assessment completed?	○ 13a	○ 13b

Section "Q" is not complete without the following information attached:

1. ○ Copies of laboratory results of sample(s) and test(s) for oil / petroleum hydrocarbons.
2. ○ Description of area sampled.
3. ○ Photographs indicating sampled area.
4. ○ Site map indicating location of closed AST and associated piping.
5. ○ Copy of local code permit.

XIII. COMPLIANCE CERTIFICATION: (Complete for all new and upgraded tanks at this location) (Not Applicable)

A. OWNER'S TANK IDENTIFICATION NUMBER: (example: 000001; no commas)

B. Installer certified by tank and piping manufacturers?

1. ○ Yes 2. ○ No

C. Installation inspected by registered engineer?

1. ○ Yes 2. ○ No

D. Installation completed to which standard?

1. ○ API 650
2. ○ UL 142
3. ○ API 620
4. ○ Other (Specify on Page 9)

E. Manufacturer's installation checklist(s) have been completed?

1. ○ Yes 2. ○ No

F. "Certificate of Use" issued by local permitting official?

1. ○ Yes 2. ○ No

Tank 5

20208

STATE USE ONLY FAC ID

DEQ Form 7540-AST: REGISTRATION FOR ABOVEGROUND STORAGE TANK(S) Page: 9

TANK INFORMATION

XIII. (continued) (Complete all tank sheets for each tank at this location)

G. OATH: *I certify the information concerning installation data is provided in section XIII is true to the best of my belief and knowledge.*

Installer Name: _____

Company Name: _____

Installer Position: _____

Signature: _____ Date: _____

XIV. OWNER CERTIFICATION (Read and sign after completing all sections of this registration/notification.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.
(To be signed by either the owner or the owner's authorized representative).

Name and official title of owner: _____

Signature: _____ Date: _____

Name and official title of owner's authorized representative:

Scott Day - Manager, Oil Division

Signature: _____ Date: 11-15-02

USE THIS SPACE TO SPECIFY "OTHER" INFORMATION OF FORM: (Use additional sheets as needed)

VII. C.
VII. E. Waste Oil Storage Facility
X. E.
XI. D.
XII. E.
XII. F.
XII. G. Welded Steel
XII. I.
XII. K.
XII. L.
XII. M.
XII. O.
XII. P.
XII. Q.

ADDITIONAL COMMENTS: _____

25345

STATE USE ONLY FAC ID [ ] - [ ]

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

XII. DESCRIPTION OF ABOVEGROUND TANKS: (Fill in all that apply)

A. OWNER'S TANK IDENTIFICATION NUMBER: (Example: 00001; no comma) 000008

B. TANK STATUS:

1. ○ New Installation
2. ● Currently in Use
3. ○ Upgrade
4. ○ Repaired
5. ○ Converted
6. ○ Replacement
7. ○ Change in Service
8. ○ Temporarily Out of Use
9. ○ Permanently Out of Use

C. INSTALLATION DATE (MMDDYY): 050195

D. TOTAL STORAGE CAPACITY OF TANK (in gallons) 00005000

E. TANK MATERIAL OF CONSTRUCTION:

1. ● Painted/Bare Single-walled Steel
2. ○ Cathodically Protected Steel
3. ○ Composite(Steel w/Fiberglass)
4. ○ Fiberglass Reinforced Plastic
5. ○ Insulated/Tank Jacket
6. ○ Lined Interior
7. ○ Double-Walled
8. ○ Double Bottomed
9. ○ Concrete
10. ○ Excavation Liner
11. ○ Epoxy Coated Steel (Internal)
12. ○ Epoxy Coated Steel (External)
13. ○ Unknown
14. ○ Other (Specify on Page 9)

F. FOUNDATION CONSTRUCTION MATERIAL:

1. ○ Earthen Material
2. ○ Concrete with Impermeable Material
3. ○ Steel
4. ● Concrete without Impermeable Material
5. ○ Unknown
6. ○ Other

G. ROOF CONSTRUCTION TYPE:

1. ○ Floating Roof
2. ○ Bolted Steel Cone Roof
3. ○ Breather Roof
4. ○ Double Deck Roof
5. ○ Pontoon Roof
6. ○ Balloon Roof
7. ○ Lifter Roof
8. ○ Pan Roof
9. ● Other (Specify on Page 9)

H. PIPING TYPE:

1. ○ Below Ground Pipes
2. ● Above Ground Pipes
3. ○ Both

I. PIPING CONSTRUCTION MATERIAL:

1. ● Bare Steel
2. ○ Galvanized Steel
3. ○ Copper
4. ○ Fiberglass Reinforced Plastic
5. ○ Double-walled
6. ○ Secondary Containment
7. ○ Unknown
8. ○ Other (Specify on Page 9)

J. TANK CATHODIC PROTECTION:

1. ● None
2. ○ Sacrificial Anode(s)
3. ○ Impressed Current

Tank 8

23346

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

K. TANK CONTAINMENT AND/OR DIVERSIONARY STRUCTURES OR EQUIPMENT: (Fill in all circles that apply)

1. ○ Curbing
2. ○ Weirs and/or Berms
3. ○ Sorbent Materials
4. ○ Culverts and/or Covers
5. ○ Spill Diversion Pools
6. ○ Retention Ponds
7. ● Dikes/Berms/Retaining Walls
8. ○ Unknown
9. ○ Other (Specify on Page 9)

L. RELEASE PREVENTION BARRIERS:

1. ○ Double Bottom
2. ○ Doublewalled
3. ○ Lined Interior
4. ○ Polyethylene Jacket
5. ○ Excavation Liner
6. ● None
7. ○ Unknown
8. ○ Other (Specify on Page 9)

M. RELEASE DETECTION METHOD:

1. ○ Groundwater Monitoring
2. ● Visual Monitoring
3. ○ Vapor Monitoring
4. ○ Interstitial Monitoring
5. ○ None
6. ○ Other (Specify on Page 9)

N. TANK SAFE FILL AND SHUTDOWN PROCEDURES:

1. Does tank have a gauge measuring liquid level of tank?

   a. ○ Yes b. ● No

2. Date gauge was last calibrated: (MMDDYY) [ ][ ][ ][ ][ ][ ]

3. High level alarmed installed?

   a. ○ Yes b. ● No

4. Type of high level alarm:

   a. ○ Visual b. ○ Audible c. ○ Both

O. AST AND FACILITY INSPECTIONS:

(N/A = Not applicable; N/C = Not conducted; Unk = Unknown; Date = Date inspected)

Information Requested	N/A	N/C	Unk	Date (MMDDYY)
1. Last cathodic protection evaluation for AST.	○	●	○	[ ][ ][ ][ ][ ][ ]
2. Last formal external tank inspection.	○	●	○	[ ][ ][ ][ ][ ][ ]
3. Last formal external tank re-inspection.	○	●	○	[ ][ ][ ][ ][ ][ ]
4. Last formal internal tank inspection.	○	●	○	[ ][ ][ ][ ][ ][ ]
5. Last formal internal tank re-inspection.	○	●	○	[ ][ ][ ][ ][ ][ ]

Tank 8

23345

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

	N/A	N/C	Unk	Date (MMDDYY)
6. Last hydrostatic testing for piping.	○	●	○	
7. Last corrosion protection for aboveground piping.	○	●	○	
8. Last cathodic protection for underground piping.	○	●	○	
9. Last berm or dike evaluation or certification by a professional engineer.	○	●	○	

10. Has AST had any major repairs or alterations? If yes, specify on page 9.
a. ○ Yes b. ● No

P. SUBSTANCE CURRENTLY OR LAST STORED IN TANK:

1. ○ Gasoline
2. ○ Diesel Fuel
3. ○ Gasohol
4. ● Heating Oil
5. ○ Fuel Oil
6. ○ Kerosene
7. ○ Used Oil
8. ○ Lubricating Oil
9. ○ Bunker "C"
10. ○ Jet Fuel
11. ○ Aviation Gasoline
12. ○ Other (Specify on Page 9)

Q. TEMPORARY OR PERMANENT TANK CLOSURES: (Not Applicable)

1. Type:
a. ○ Temporary closure b. ○ Permanent closure

2. Date tank was last used (MMDDYY)
a. ○ Unknown b.

3. Date tank was last closed (MMDDYY)
a. ○ Unknown b.

4. Has a site assessment been completed?
a. ○ Yes b. ○ No

5. Has a permit and required inspection been obtained?
a. ○ Yes b. ○ No

6. If temporary closure, has an extension of the 12 month temporary period been requested?
a. ○ Yes b. ○ No c. ○ Not Applicable

Tank 8

25345

TANK INFORMATION

(Complete all tank sheets for each tank at this location)

	Yes	No
7. Was tank dismantled?	○ 7a	○ 7b
8. Was piping dismantled?	○ 8a	○ 8b
9. Was tank closed in place?	○ 9a	○ 9b
10. Was piping closed in place?	○ 10a	○ 10b
11. Was closure approved by local building official inspector?	○ 11a	○ 11b
12. Was evidence of leak detected?	○ 12a	○ 12b
13. Was closure assessment completed?	○ 13a	○ 13b

Section "Q" is not complete without the following information attached:

1. ○ Copies of laboratory results of sample(s) and test(s) for oil / petroleum hydrocarbons.
2. ○ Description of area sampled.
3. ○ Photographs indicating sampled area.
4. ○ Site map indicating location of closed AST and associated piping.
5. ○ Copy of local code permit.

XIII. COMPLIANCE CERTIFICATION: (Complete for all new and upgraded tanks at this location) (Not Applicable)

A. OWNER'S TANK IDENTIFICATION NUMBER: (example: 000001; no commas)

B. Installer certified by tank and piping manufacturers?

1. ○ Yes 2. ○ No

C. Installation inspected by registered engineer?

1. ○ Yes 2. ○ No

D. Installation completed to which standard?

1. ○ API 650
2. ○ UL 142
3. ○ API 620
4. ○ Other (Specify on Page 9)

E. Manufacturer's installation checklist(s) have been completed?

1. ○ Yes 2. ○ No

F. "Certificate of Use" issued by local permitting official?

1. ○ Yes 2. ○ No

Tank 8

20308

STATE USE ONLY FAC.ID

DEQ Form 7540-AST: REGISTRATION FOR ABOVEGROUND STORAGE TANK(S) Page 9

TANK INFORMATION

XIII. (continued) (Complete all tank sheets for each tank at this location)

G. OATH: *I certify the information concerning installation that is provided in section XIII is true to the best of my belief and knowledge.*

Installer Name: _____

Company Name: _____

Installer Position: _____

Signature: _____ Date: _____

XIV. OWNER CERTIFICATION (Read and sign after completing all sections of this registration/notification.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.
(To be signed by either the owner or the owner's authorized representative).

Name and official title of owner: _____

Signature: _____ Date: _____

Name and official title of owner's authorized representative:

Scott Day - Manager, Oil Division

Signature: [signature] Date: 11-15-02

USE THIS SPACE TO SPECIFY "OTHER" INFORMATION OF FORM: (Use additional sheets as needed)

VII. C.
VIII. S. Waste Oil Storage Facility
X. B.
XI. D.
XII. B.
XII. E.
XII. G. Welded Steel
XII. I.
XII. K.
XII. L.
XII. M.
XII. O.
XII. P.
XII. D.

ADDITIONAL COMMENTS: _____

032002 16 P

Branchpay® 1-(800) 444-6899 Another service of Gelco Information Network, Inc. Eden Prairie, MN

26982000 05

BRANCHPAY

PAYMENT TYPE	ACCOUNT NO.	AMOUNT
Supplies Expense	5121	
Rental Equipment Expense	5184	
Vehicle Repair & Maintenance Expense	5474	
License/Permit/ Inspection Expense	5490	
Equipment Repair & Maintenance Expense	5254	
Meals Expense (Per Diem)	5530	
Lodging Expense (Per Diem)	5535	
Miscellaneous Job Expense	5550	
Miscellaneous Office Expense	6645	
TOTAL PAYMENT ▷		

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.
1501 WASHINGTON STREET PO BOX 859048 • BRAINTREE, MA 02185-9048

JOB NUMBER	INVOICE NUMBER

070064849 7

BP AUTH. NO.	DATE (M M D D Y Y)
10322	112502

NOT VALID AFTER ONE MONTH FROM DATE

PAY TO THE ORDER OF Treasurer of Virginia
(NAME) (PAYEE) PLEASE PRINT CLEARLY

PO Box 10150 (ADDRESS) Richmond (CITY) VA (STATE)

THE AMOUNT OF fifty DOLLARS $ 50.00
NOT GOOD FOR MORE THAN $500.00

PAYABLE THROUGH
First PREMIER Bank
SIOUX FALLS, SD

78-858
914

~~Herndon~~ 64VA

SIGNATURE ON BEHALF OF PAYEE

Kristy McNeil
SIGNATURE OF DRAWER'S AUTHORIZED REPRESENTATIVE

By signing this instrument, each of the aforesigned confirms that this instrument has been drawn in accordance with the authority issued by Gelco Information Network, Inc. If any statement herein be untrue, we, the aforesigned, agree to pay the drawer upon demand the amount of this instrument and all expenses and damages arising from such misstatement.

⑈070064849 7⑈ ⑆091408585⑆ 2500000183⑈

Clean Harbors®
ENVIRONMENTAL SERVICES, INC.

221 Sutton Street
North Andover, MA 01845

RECEIVED
BY: KDS

VIA FEDEAL EXPRESS

September 17, 2003

Mr. James Dawson
South Central Wastewater Authority
900 Magazine Road
Petersburg, VA 23803

Re: Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, VA 23875
Industrial Wastewater Discharge Permit Number 018

Dear Mr. Dawson:

Clean Harbors Environmental Services, Inc. (CHESI; the facility) operates an oil recovery and wastewater treatment facility, as well as a field service center, at the address referenced above. The facility is currently authorized to discharge wastewater to the South Central Wastewater Authority (SCWWA) under Industrial Wastewater Discharge Permit Number 018. In July 2003, the facility began a mothballing process, with the acceptance of wastes ending on July 18th. With the mothballing process completed, CHESI requests that its Industrial Wastewater Discharge Permit be rescinded as of the date of this letter, September 17, 2003. At the request of Mr. Edward Waskey of the SCWWA, I am providing the following details on the mothballing of the oil recovery and wastewater treatment operation. The facility will continue to operate as a field service office.

The facility stopped accepting wastewaters and sludges on June 27, 2003 and oil on July 18, 2003. All wastewater remaining on-site was treated and discharged in accordance with the facility's discharge permit. All sludges and lab wastes, in addition to any oil which had not been marketed to end users, were shipped off-site to licensed transfer, storage, and disposal facilities. The carbon vessels from the facility's pretreatment system were removed and sent to Envirotrol in Pennsylvania for carbon regeneration.

All pretreatment equipment will be left on-site. Frac tanks used for holding treated wastewater prior to discharge were removed from the facility, as they were not part of the actual pretreatment system. As stated above, the carbon vessels were removed and sent to Envirotrol for carbon regeneration. All of the processing and storage tanks were emptied and cleaned. The discharge pipe to the sewer was plugged and all power has been shut off to the system.

In my conversations with Mr. Waskey, he stated that he would have to perform a final site walk-through to verify the information I've supplied in this letter is accurate. Mr. John Dicarlo of CHESI is available anytime next week (September 15th through 19th) to meet Mr. Waskey at the facility. Mr. Dicarlo can be contacted at 804-452-1800, extension 228.

The semi-annual self-monitoring report for wastewaters treated during the second half of 2003 was delivered to Mr. Waskey on August 27, 2003 by Mr. David Kirchoff of CHESI. This report covered wastewater treated during the months of July and August 2003. No further treatment of wastewater took place after this period. Mr. Kirchoff also supplied Mr. Waskey with a copy of the hazardous waste manifest on which the facility's lab wastes were shipped off-site.

It is CHESI's understanding that if we choose to re-activate the facility at a later date, it would be an existing source under the new Centralized Waste Treatment (CWT) regulations as long as the pretreatment system is kept intact and the facility re-opens performing the same business as it did prior to being moth-balled (oil recovery) and only accepts wastes from the industry sectors it dealt with prior to being moth-balled.

As for CHESI's ability to meet the new CWT discharge limitations that go into effect on December 22, 2003, CHESI believes it would able to treat wastewater from all three categories (Oily, Metals Bearing, and Organics), and be in compliance, utilizing the existing equipment. Based upon jar tests performed at CHESI's sister facility in South Portland, ME, modifications will not be required in order to meet the CWT discharge standards. Wastewater samples from both the Prince George and South Portland facilities were bench tested to confirm chemical batch treatment. The South Portland facility treats similar waste streams to the Prince George facility. In the event CHESI reactivates the Prince George facility, CHESI may make modifications to wastewater treatment system, but only to enhance the process. No modifications will be required in order to meet the new CWT standards.

If you have any questions regarding this submittal, please feel free to contact me at 978-683-1002, extension 5342.

Sincerely,

Wallace M Bell

Wallace M. Bell
Corporate Compliance Manager

cc: Mr. Stephen McBride, P.E. – Prince George County
Mr. William Tfeifle - Virginia DEQ
Mr. Clarence E. Waskey, Ph.D. - SCWWA
Mr. Scott Day - CHESI

900 Magazine Road
Petersburg, VA 23803
Tel: (804) 861-0111
Fax: (804) 861-3254

RECEIVED
FEB 1 2004
VIRGINIA CAS

February 17, 2004

Mr. John DiCarlo
General Manager of Field Services
Clean Harbors Environmental Services, Inc.
7515 Harvest Drive
Prince George, Virginia 23875

Re: **Facility Inspection – November 7, 2003**

Dear Mr. DiCarlo:

Please find enclose a copy of the above referenced inspection. This is the final inspection of the facility as a result of the permit rescission as requested by Clean Harbors Environmental Services, Inc. Please note the final inspection summary on page 9 of 9. Please review and advise of any possible errors or omissions.

If you should have any questions, please do not hesitate to contact me at (804) 861-0111, or e-mail ewaskey@scwwa.org.

Sincerely yours,

Clarence E. Waskey, Ph.D.
Laboratory Manager/Pretreatment Coordinator

Cc: James C. Dawson, P.E. – Assistant Executive Director – SCWWA
Stephen McBride, P.E. – County Engineer – Prince George County
Michael Briddell, P.E. – Acting Director Public Works – City of Petersburg
William Pfeifle – Pretreatment Coordinator - DEQ – PRO

SOUTH CENTRAL WASTEWATER AUTHORITY
INDUSTRIAL PRETREATMENT INSPECTION REPORT

A. General Information:

Industry Name: **Clean Harbors Environmental Services** Permit No.: **018**
Permit rescinded as of Sept. 17, 2003
Site Address: **7515 Harvest Drive**
Prince George, Virginia 23875

Correspondence Address: **7515 Harvest Drive**
Prince George, Virginia 23875

Name of Receiving POTW: **South Central Wastewater Authority (SCWWA)**

Date of Inspection: **November 7, 2003 1030 hrs. FINAL INSPECTION**

Participants:

Name	Title	Phone
Clarence E. Waskey	**IPP Coordinator**	**861-0111**
John DiCarlo	**General Mgr. Field Services**	**452-1818**
Hilton Judge	**Chemist – SCWWA**	**861-0111**

SD Contact:
POTW Representative: **Clarence E. Waskey, Pretreatment Coordinator**
Other:
Is the SD subject to categorical pretreatment stds? Yes X No

If yes, list standards and applicable subcategories: **N/A**
Type of operation or product and applicable Standard Industrial Classification (SIC) code(s): **Water/ Oil Separating Facility SIC 4953**

Date the industry was established on site: **1994, previously Chemical Waste Management, 1991.**

Number of employees per shift: **Total Employees = 21**
8:00 am to 6:00 pm Monday- Friday
Total daily flow of industrial waste: **None, Permit rescinded 9/17/03**
Total daily flow of sanitary waste: **21 x 20 = 420 gpd**
Are the sanitary and industrial wastewater streams combined? Yes X No
Prior to wastewater treatment? Yes No X NA
Prior to connecting to the POTW sanitary system? Yes No X NA

Revised 02/04/02

Sketch or attach a schematic of all wastewater discharge lines which combine to flow to the POTW sanitary system. Superimpose this schematic on a site plan or floor plan of the facility if possible.

See Attachment

B. Industrial Processes and Pretreatment

Describe the basic industrial process and any constituent unit operations. Include auxillary or utility processes, such as boiler or cooling tower blowdown and heating or cooling systems which discharge to the POTW. Sketch or attach a block flow diagram, noting which process steps generate wastewater. Indicate which of these wastewater streams receive some form of pretreatment. Have shell-and-tube condensers been considered for replacement of any contact barometric condensers?

Facility accepted waste oil, oily water mixtures and non-hazardous wastewater. Facility has been closed as a RCRA facility since 2001. Pretreatment schematic is attached. Permit was modified in 2000 to allow for greater discharge volume from new waste stream and include a flash point requirement.

NOTE:

Process shutdown and permit was rescinded on September 17, 2003 as requested by the IU.

List pollutants at the plant, categorized as follows: (1) pollutants that come into direct contact with water that is discharged to the POTW, and; (2) pollutants that do not come into direct contact, but have the potential to enter through spills, malfunctions, etc. **NA – Permit rescinded**

(1)	(2)
(1)	(2)
(1)	(2)
(1)	(2)
(1)	(2)
(1)	

Does the facility have any air pollution control equipment which generates a wastestreams? Yes **X** No

If yes, describe the flow rate, composition and the discharge method and location: **N/A**

Is the facility a RCRA Hazardous Waste Generator (either through the basic process or residuals from treatment processes)? **X** Yes No

Has the POTW notified the industry of RCRA obligations? **X** Yes No

Describe the methods for handling, storing and disposing of solid and/or hazardous waste residuals. (include the name and address of any contract haulers):

Solid waste was thermal treated. Lab waste sent to Baltimore. Bag filters and carbon are the only hazardous waste. Bag filters were sent to Baltimore for further processing and disposal either in Baltimore or Massachusetts. Carbon was returned to Envirotrol located in Swickley, PA for regeneration.

Describe the pretreatment facility used by the facility. If the system has multiple process steps, provide a block diagram indicating the treatment steps and their sequence. Attach copies of vendor specifications and drawings and actual operating data, if these are available:

See Attached Diagram.

Is the treatment facility properly operated and maintained? (Pertinent characteristics to check might include operators, availability of standby power, alarm systems, operations and maintenance manuals, calibration of control instrumentation and disposal of sludges and any routing of liquid return from sludge dewatering equipment): **Yes, Separation tanks have manuals and instructions available.**

C. Sampling

Does the facility have a control manhole for sampling access? X Yes No

If so, where is it located? (If possible, note the location on the wastewater discharge schematic in Section A. of this checklist): **See site specific map. Discharge line has been cut and capped as a result of facility shutdown and rescission of discharge permit.**

Does such a manhole provide access to the waste stream that is end-of-pipe for the industry before discharge to the POTW? X Yes No NA

Is this wastestream a combined process wastestream? X Yes No

If yes, are the wastestreams combined prior to pretreatment X Yes No

If the industry has several wastestreams regulated by categorical standards, are other safe locations available that are appropriate for sampling at the end of these processes? **N/A**

Are flow meters and pH meters properly calibrated? X Yes No NA
Date of last calibration: **With each batch discharge.**

Person conducting calibration: **Operator. Facility performed complete chemical analysis for each batch prior to discharge.**

If there is not a safe and practical alternative to sampling a combined wastestream, accurate flow rates for the regulated process streams and any dilution flows must be obtained from the industry and recorded here. Dilution flows include sanitary waste, noncontact cooling water, boiler blowdown and other process wastestreams which are exempt from categorical pretreatment standards. [Note whether dilution flows tie into the process wastestreams before or after any pretreatment? **NA**

Has the industry identified any specific hazards at the sampling location(s):

X Yes No **Slips, falls, respiratory protection while sampling.**

If so, what are they and have the POTW personnel been notified of such?
N/A

Does the industry perform chemical analyses required for self-monitoring "in-house"? Yes X No

If no, record the name and business address of any contract private laboratory:

Primary Laboratories
2087 Dabney Road
Richmond, Virginia 23230

Phone: (804) 213-0831
FAX: (804) 213-0842

D. Spill Prevention

Describe spill control methods used by the industry. Does it have a Spill Prevention Control and Countermeasures (SPCC) Plan? Is there a past history of spills that were not contained? **Facility had an outdoor production area. There were no floor drains or access to sewer system. Spill control materials are on hand. SPCC plan is on file.**

Are diked chemical storage areas of sufficient size and in proper structural condition to provide for containment of their contents? **Yes.**

Are chemical storage areas located in close proximity to floor drains?
Yes X No

If so, do the floor drains discharge to the sanitary or storm sewer? **NA**

Are employees informed of the need to keep unauthorized chemicals out of the sanitary sewer? Yes No X NA
If yes, by what means: **NA**

Are chemical or wastewater pumps totally sealed, or are shafts sealed with packing or mechanical seals? If packing is used, where is leakage directed?
Mechanically sealed pumps on site.

E. Total Toxic Organic (Electroplating/Metal Finishing Only)
If the industry is subject to Electroplating, Electronic or Metal Finishing Standards, has it submitted a Solvent Toxic Organic Management Plan; has there been any change to the contents and condition outlined by the plan?
N/A

G. Requirements – All required items must be completed within 45 days of the inspection and written confirmation of completion submitted to the Executive Director of the South Central Wastewater Authority.

None. Process section of facility has been shutdown and permit rescinded.

H. Recommendations:

None. Process section of facility has been shutdown and permit rescinded.

AUXILIARY/UTILITY FLOWS

AUXILIARY PROCESS	FREQUENCY OF DISCHARGE	FLOW	ASSOCIATED CHEMICALS	DISCHARGE LOCATION
BOILER BLOWDOWN	NA			
COOLING TOWER BLOWDOWN	NA			
AIR COMPRESSOR COOLING WATER	NA			
AIR COMPRESSOR CONDENSATE	NA			
DEMINERALIZER/ SOFTENER REGENERATION WASTEWATER	NA			
OTHER COOLING WATER:	NA			
HOUSEKEEPING/ FLOOR WASH WATER (DILUTION)	NA			

Clarence E. Washington — Inspector — 2/12/04 — Date

James C. Warren — Reviewer — 2/16/2004 — Date

Summary of Final Inspection

- See attached letter requesting rescission of permit and SCWWA letter rescinding permit as requested.
- Discharge line has been cut and capped.
- Pretreatment facility has been left at site in the event the IU wishes to reactivate the facility as categorical under 40 CFR Part 437 – Centralized Waste Treatment
- Records are maintained on site
- See attached hazardous waste manifest for disposal of hazardous material.
- If in the future the facility wishes to reactivate the treatment/discharge process, facility must reapply for a discharge permit.
- If facility wishes to reactivate facility for permit in the future, under 40 CFR Part 437 existing source, pretreatment equipment must be maintained, i.e., tanks kept painted, etc.

C & M Industries, Inc.

WORK ORDER 47206

Telephones: (757) 543-8775
(757) 543-7665
(757) 475-4837 Emergency Contact (24 HR)

121 Republic Road
Chesapeake, Virginia 23324

EPA I.D. Number
VAR 000004721

TO: CLEAN HARBOR

ADDRESS:

JOBSITE: PRINCE GEORGE VA

Date NOV 6 2003

Purchase Order No.

Truck Charge..... $

Gallonage Charge 4860 at ____ per gallon $
WATER $
$
$
$
$

Shipping Name: Petroleum Oil
Hazard Class: Combustible Liquid
I.D. Number: NA 1270
PGK Group: III
Truck Load:
Empty:

Total Charge $

Received from [signature]

Received by [signature]

"Dike Water"

Total Quantity	Unit Wt/Vol	STCC Code	Placarded:
00048600	TT G	- -	N/A

EMERGENCY NUMBER:	CONTRACT NUMBER:
1 - 800 - OIL - TANK	N/A

Manifest Numbers (Transfered into Rail Car):

Additional Information/ Descriptions (Include Waste Codes):

Seal Numbers:
Top -
Bottom -
Other -

GENERATOR'S Name and Mailing Address:	TSDF'S Name and Mailing Address:
Name SAME AS	Name Clean Harbor Env Service
Street Shipper	Street 7515 Harvey RD
City State	City Prince George State VA
Zip Code Telephone	Zip Code 23875 Telephone 804-452-1800
Shipper's Signature [signature]	Transporter's Signature (Rail):

SELECT GRAPHICS, P.O. BOX 56, NORWELL, MA 02061 (617) 826-3712

VA Generic

CleanHarbors

STRAIGHT BILL OF LADING

Check One:
- [x] Non-Hazardous Material
- [ ] Hazardous Material
- [ ] Hazardous Waste

DATE 11/6/2003	VEHICLE NUMBER: #1151 / #327
TO: C&M Consignee INDUSTRIES INC	FROM: Shipper CLEAN HARBOR ENV SERVICE
c/o (Transfer Fac.) (If Applicable)	c/o (Transfer Fac.) (If Applicable)
Street 739 EAST END AVE	Street 7515 HARVEST RD
City Norfolk State VA	City PRINCE GEORGE State VA
Zip Code 23504	Zip Code 23875 US EPA ID Number

ROUTING: 156-460-58-I264

FREIGHT CHARGES Freight PREPAID except when box at right is checked [ ]

US DOT Description: (Include Proper Shipping Name, Hazard Class, and ID Number)

NON HAZ NON D.O.T REGULATED "DIKE WATER"

Total Quantity	Unit Wt/Vol	STCC Code	Placarded:
00041816	G	- -	N/A

EMERGENCY NUMBER: 1 - 800 - OIL - TANK	CONTRACT NUMBER: N/A

Manifest Numbers (Transfered into Rail Car):

Additional Information/ Descriptions (Include Waste Codes):

Seal Numbers:
Top -
Bottom -
Other -

GENERATOR'S Name and Mailing Address:	TSDF'S Name and Mailing Address:
Name SAME AS	Name CLEAN HARBOR ENV SERVICE
Street Shipper	Street 7515 HARVEST RD
City State	City PRINCE GEORGE State VA
Zip Code Telephone	Zip Code 23875 Telephone 804-452-1802
Shipper's Signature	Transporter's Signature (Rail):

SELECT GRAPHICS, P.O. BOX 56, NORWELL, MA 02061 (617) 826-3712

VA Generic

Clean Harbors

STRAIGHT BILL OF LADING

Check One:
- [x] Non-Hazardous Material
- [ ] Hazardous Material
- [ ] Hazardous Waste

DATE 11/5/2003	VEHICLE NUMBER: ~~#140~~ / #1151 / #5
TO: Consignee C&M Industries Inc	FROM: Shipper Clean Harbors Env Service
c/o (Transfer Fac.) (If Applicable)	c/o (Transfer Fac.) (If Applicable)
Street 739 East End Ave	Street 7515 Harvest RD
City Norfolk State VA	City Prince George State VA
Zip Code 23504	Zip Code 23875 US EPA ID Number

ROUTING: I64-I264

FREIGHT CHARGES Freight PREPAID except when box at right is checked ☐

US DOT Description: (Include Proper Shipping Name, Hazard Class, and ID Number)

NON HAZ-NON D.O.T Regulated "Dike Water"

Total Quantity	Unit Wt/Vol	STCC Code	Placarded:
0005300	TT G	- -	N/A

EMERGENCY NUMBER:	CONTRACT NUMBER:
1 - 800 - OIL - TANK	N/A

Manifest Numbers (Transfered into Rail Car):

N/A

Additional Information/ Descriptions (include Waste Codes):	Seal Numbers: Top - Bottom - Other -
GENERATOR'S Name and Mailing Address:	TSDF'S Name and Mailing Address:
Name Same as Shipper	Name Clean Harbor Env Service
Street	Street 7515 Harvest RD
City State	City Prince George State VA
Zip Code Telephone	Zip Code 23875 Telephone
Shipper's Signature Doug Kirchoff	Transporter's Signature (Rail):

SELECT GRAPHICS, P.O. BOX 56, NORWELL, MA 02061 (617) 826-3712

(Dike H_2O)

CleanHarbors

STRAIGHT BILL OF LADING

Check One:
- [x] Non-Hazardous Material
- [ ] Hazardous Material
- [ ] Hazardous Waste

DATE 11 17 03	VEHICLE NUMBER: 1151 / 3115
TO: Consignee	FROM: Shipper Clean Harbors Env.
c/o (Transfer Fac.) (If Applicable) CJM Recycling	c/o (Transfer Fac.) (If Applicable)
Street 121 Republic Road	Street 7515 Harvest Road
City Norfolk State VA	City Prince George State VA.
Zip Code 23324	Zip Code 23875 US EPA ID Number

ROUTING:

FREIGHT CHARGES Freight PREPAID except when box at right is checked [ ]

US DOT Description: (Include Proper Shipping Name, Hazard Class, and ID Number)

Non Haz - Non Dot Regulated water (dike water)

Total Quantity	Unit Wt/Vol	STCC Code	Placarded:
5 3 0 0 0	gal	- -	N/A

EMERGENCY NUMBER: 1 - 800 - OIL - TANK	CONTRACT NUMBER:

Manifest Numbers (Transfered into Rail Car):

Additional Information/ Descriptions (include Waste Codes):	Seal Numbers: Top - Bottom - Other -
GENERATOR'S Name and Mailing Address:	TSDF'S Name and Mailing Address:
Name Clean Harbor Env.	Name Same as shipper
Street 7515 Harvest Road	Street
City Prince George State VA.	City State
Zip Code 23875 Telephone 804 452-1800	Zip Code Telephone

C & M Industries, Inc.

WORK ORDER
No. 47198

121 Republic Road
Chesapeake, Virginia 23324

EPA I.D. Number
VAR 000004721

Telephones: (757) 543-8775
(757) 543-7665
(757) 475-4837 Emergency Contact (24 HR)

TO: CLEAN HARBORS

ADDRESS:

JOBSITE: PRINCE GEORGE VA

Date NOV 5 2003

Purchase Order No.

Truck Charge	$	Shipping Name:	Petroleum Oil
		Hazard Class:	Combustible Liquid
Gallonage Charge 5300 at ____ per gallon	$	I.D. Number:	NA 1270
WATER	$	PGK Group:	III
	$	Truck Load:	
	$	Empty:	
	$		
	$	Total Charge $	

Received from

Received by

VAGENERIC vageneric

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. VAD988175055 Manifest Document No. 81103

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Clean Harbors Env. Services
7515 Harvest Road
Prince George, VA 23875

4. Generator's Phone (804 452-1800)

A. State Manifest Document Number VAC4081103

B. State Generator's ID SAME

5. Transporter 1 Company Name
Maumee Express Incorporated

6. US EPA ID Number NJD986607380

C. State Transporter's ID

D. Transporter's Phone 908 271-0520

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Clean Harbors Reidsville LLC
208 Watlington Industrial Drive
Reidsville, NC, 27320

10. US EPA ID Number NCD000648451

G. State Facility's ID 9370019999

H. Facility's Phone 336 342-6106

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	Waste, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Hydrochloric acid,Nitric Acid), 8, UN3264, PG II	001	DF	00024	P	D002
b.	RQ	Waste, Flammable liquids, n.o.s.(HEXANE,XYLENE), 3, UN1993, PG II (D001 U239)	001	DM	00125	P	D001 U154 U002 U239
c.	RQ	Waste, CORROSIVE LIQUIDS, TOXIC, N.O.S.(MERCURIC IODIDE,POTASSIUM HYDROXIDE), 8, UN2922, PG II (D009)	001	DF	00010	P	D009 D002
d.	X	NON DOT REGULATED MATERIAL(FLORISIL,PH BUFFER SOLUTIONS)	001	DF	00030	P	NONE

J. Additional Descriptions for Materials Listed Above
a: LCCRA LP 1x16 (L,C) c: LCHG1 LP 1x5 (L,E,C)
b: LCCRD LP 1x55 (L,I,T) d: LCCRN LP 1x16 (S,)

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
24 HOUR EMERGENCY # (800) 645 - 8265
WO#VAGENERIC

11a B001, A9
11b B001, A9
11c B001, A9
11d B001, A9

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Gary Young
Signature: [signature]
Month Day Year: 08 15 0

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year: 08 0

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

GENERATOR / TRANSPORTER / FACILITY

Style CF 17 LABELMASTER® (800) 621-5808 www.labelmaster.com

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsole

ORIGINAL-RETURN TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

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Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: V A D 9 8 8 1 7 5 0 5 5 8 1 2 0 3

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Clean Harbors Env. Services, 7515 Harvest Road, Prince George, VA 23875

4. Generator's Phone (804 452-1800

A. State Manifest Document Number: VAC4081203

B. State Generator's ID: SAME

5. Transporter 1 Company Name: Maumee Express Incorporated

6. US EPA ID Number: N J D 9 8 6 6 0 7 3 8 0

C. State Transporter's ID

D. Transporter's Phone: 908 271-0520

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: Clean Harbors Reidsville LLC, 208 Watlington Industrial Drive, Reidsville, NC, 27320

10. US EPA ID Number: N C D 0 0 0 6 4 8 4 5 1

G. State Facility's ID: 9370019999

H. Facility's Phone: 336 342-6106

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	Waste, Flammable liquids, n.o.s.(METHANOL,PCB STANDARDS), 3, UN1993, PG II	X	0 0 1	D F	0 0 0 0 1	K	D001
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: a: LCHSI LP 1x5 (L,I)

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information: 24 HOUR EMERGENCY # (800) 645 - 8265

WO#VAGENERIC OUT OF SERVICE DATE:8/15/03 11a B001, A94

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Gary Young | Signature: [signature] | Month Day Year: 08 15 0

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year: 08 0

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

GENERATOR

TRANSPORTER

FACILITY

Style CF 17 LABELMASTER (800) 621-5808 www.labelmaster.com

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete

ORIGINAL-RETURN TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

PRINTED ON RECYCLED PAPER USING SOYBEAN INK PRINTED WITH SOY INK

MARYLAND DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway Baltimore, Maryland 21224

(410) 631-3344 1-800-633-6101 (within Maryland) http://www.mde.state.md.us

HAZARDOUS WASTE PROGRAM VAGENERIC vageneric

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) HAZARDOUS WASTE MANIFEST Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. VAD988175055 Manifest Document No. 71808

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Clean Harbors Env. Services
7515 Harvest Road
Prince George, VA 23875

4. Generator's Phone (804 452-1800

A. State Manifest Document Number MDC 0971808

B. State Generator's ID SAME

C. State Transporter's ID HWH DC

D. Transporter's Phone 908 271-0520

E. State Transporter's ID HWH DC

F. Transporter's Phone

G. State Facility ID A-151

H. Facility's Phone 4102448200

5. Transporter 1 Company Name
Maumee Express Incorporated

6. US EPA ID Number NJD986607380

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
Clean Harbors Of Baltimore Inc
1910 Russell Street
Baltimore, MD, 21230

10. US EPA ID Number MDD980555189

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, Waste, Flammable liquids, n.o.s.(Isopropyl Alcohol), 3, UN1993, PG II (D001)	001	DM	00300	PD	001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

	Haz. Code	Physical State	Specific Gravity	Percentage
a.	I	L	1.0	100
b.				
c.				
d.				

a: T14580 1X55

K. Handling Codes for Wastes Listed Above

a. c.

b. d.

15. Special Handling Instructions and Additional Information
WO#VAGENERIC

24 HOUR EMERGENCY #
(908) 271 - 0520

16. GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and Maryland Statutes or Regulation.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Gary Young
Signature: Gary K. Young
Month Day Year: 08 15 03

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day: 08 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.
Printed/Typed Name
Signature
Date Month Day

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill, immediately call the National Response Center at (800) 424-8802 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3551.

MDC 0971808

EPA Form 8700-22 (9-99)
Previous editions are obsolete

COPY 1 - FACILITY: DETACH & RETURN THIS COPY TO DISPOSAL STATE

MONTHLY INDUSTRIAL DISCHARGE REPORT

FACILITY: PRINCE GEORGE, VA

MONTH: August 2003

DATE	TIME	ANALYTICAL #	G-START	G-END	TOTAL	TOTAL MTD	TANK	OPERATOR
8-12-03	8:30AM	8-6-03 T6	0	10000	10,000	10,000	T6	[illegible]
8-14-03.	10AM	8-6-03 T7	0	10,000	20,000	20,000	T7	[illegible]

900 Magazine Road
Petersburg, VA 23803
Tel: (804) 861-0111
Fax: (804) 861-3254

November 11, 2003

Mr. Wallace M. Bell
Compliance Manager
Clean Harbors Environmental Services, Inc.
P.O. Box 859048
Braintree, MA 02185-9048

Re: **Facility Final Inspection and Discharge Permit 018 Rescission**

Dear Mr. Bell:

Your facility located at 7515 Harvest Road, Prince George, Virginia was inspected on November 7, 2003. This inspection concludes the final requirements for rescission of the facility's discharge permit as requested by Clean Harbors Environmental Services, Inc. (CHESI).

The permit is rescinded as of September 17, 2003, as requested in your letter dated September 17, 2003. If CHESI wishes to reactivate the facility, an application must be submitted for a new permit issued under the requirements of the Centralized Waste Treatment National Standards, 40 CFR Part 437.

It appears from the inspection, that all material associated with the operation has been removed, and manifest received by the Authority indicates the material was disposed of in accordance with current rules and regulations.

If you should have any questions, please do not hesitate to contact me , or Dr. Clarence E. Waskey, at (804) 861-0111, e-mail cdawson@scwwa.org, or ewaskey@scwwa.org.

Sincerely yours,

James C. Dawson, P.E.
Assistant Executive Director

Cc: Clarence E. Waskey, Ph.D. – Lab Mgr./Pretreatment Coord. – SCWWA
Steve McBride, P.E. – County Engineer – Prince George County
William Pfeifle – Pretreatment Manager - DEQ – PRO
Michael Briddell, P.E. – Acting Director of Public Works – City of Petersburg

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

221 Sutton Street
North Andover, MA 01845

RECEIVED
BY: KDS

VIA FEDEAL EXPRESS

September 17, 2003

Mr. James Dawson
South Central Wastewater Authority
900 Magazine Road
Petersburg, VA 23803

Re: Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, VA 23875
Industrial Wastewater Discharge Permit Number 018

Dear Mr. Dawson:

Clean Harbors Environmental Services, Inc. (CHESI; the facility) operates an oil recovery and wastewater treatment facility, as well as a field service center, at the address referenced above. The facility is currently authorized to discharge wastewater to the South Central Wastewater Authority (SCWWA) under Industrial Wastewater Discharge Permit Number 018. In July 2003, the facility began a mothballing process, with the acceptance of wastes ending on July 18th. With the mothballing process completed, CHESI requests that its Industrial Wastewater Discharge Permit be rescinded as of the date of this letter, September 17, 2003. At the request of Mr. Edward Waskey of the SCWWA, I am providing the following details on the mothballing of the oil recovery and wastewater treatment operation. The facility will continue to operate as a field service office.

The facility stopped accepting wastewaters and sludges on June 27, 2003 and oil on July 18, 2003. All wastewater remaining on-site was treated and discharged in accordance with the facility's discharge permit. All sludges and lab wastes, in addition to any oil which had not been marketed to end users, were shipped off-site to licensed transfer, storage, and disposal facilities. The carbon vessels from the facility's pretreatment system were removed and sent to Envirotrol in Pennsylvania for carbon regeneration.

All pretreatment equipment will be left on-site. Frac tanks used for holding treated wastewater prior to discharge were removed from the facility, as they were not part of the actual pretreatment system. As stated above, the carbon vessels were removed and sent to Envirotrol for carbon regeneration. All of the processing and storage tanks were emptied and cleaned. The discharge pipe to the sewer was plugged and all power has been shut off to the system.

In my conversations with Mr. Waskey, he stated that he would have to perform a final site walk-through to verify the information I've supplied in this letter is accurate. Mr. John Dicarlo of CHESI is available anytime next week (September 15th through 19th) to meet Mr. Waskey at the facility. Mr. Dicarlo can be contacted at 804-452-1800, extension 228.

The semi-annual self-monitoring report for wastewaters treated during the second half of 2003 was delivered to Mr. Waskey on August 27, 2003 by Mr. David Kirchoff of CHESI. This report covered wastewater treated during the months of July and August 2003. No further treatment of wastewater took place after this period. Mr. Kirchoff also supplied Mr. Waskey with a copy of the hazardous waste manifest on which the facility's lab wastes were shipped off-site.

It is CHESI's understanding that if we choose to re-activate the facility at a later date, it would be an existing source under the new Centralized Waste Treatment (CWT) regulations as long as the pretreatment system is kept intact and the facility re-opens performing the same business as it did prior to being moth-balled (oil recovery) and only accepts wastes from the industry sectors it dealt with prior to being moth-balled.

As for CHESI's ability to meet the new CWT discharge limitations that go into effect on December 22, 2003, CHESI believes it would able to treat wastewater from all three categories (Oily, Metals Bearing, and Organics), and be in compliance, utilizing the existing equipment. Based upon jar tests performed at CHESI's sister facility in South Portland, ME, modifications will not be required in order to meet the CWT discharge standards. Wastewater samples from both the Prince George and South Portland facilities were bench tested to confirm chemical batch treatment. The South Portland facility treats similar waste streams to the Prince George facility. In the event CHESI reactivates the Prince George facility, CHESI may make modifications to wastewater treatment system, but only to enhance the process. No modifications will be required in order to meet the new CWT standards.

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If you have any questions regarding this submittal, please feel free to contact me at 978-683-1002, extension 5342.

Sincerely,

Wallace M Bell

Wallace M. Bell
Corporate Compliance Manager

cc: Mr. Stephen McBride, P.E. – Prince George County
Mr. William Tfeifle - Virginia DEQ
Mr. Clarence E. Waskey, Ph.D. - SCWWA
Mr. Scott Day - CHESI

CleanHarbors®
ENVIRONMENTAL SERVICES, INC.

221 Sutton Street
North Andover, MA 01845
978.683.1002
www.cleanharbors.com

Certified Mail – Return Receipt Requested (70033110000092421151)

May 17, 2004

Virginia Department of Environmental Quality
OTA/Waste Division
Attn: Dan Gwinner
629 E. Main Street
Richmond, VA 23219

Re: Site Identification Form - Subsequent Notification
Clean Harbors Environmental Services, Inc.
7515 Harvest Road
Prince George, VA 23875
EPA Identification No. VAD988175055

Dear Mr. Gwinner:

Enclosed is a Site Identification Form (EPA Form 8700-12), formerly known as the Notification of Regulated Waste Activity, for the Clean Harbors Environmental Services, Inc. facility located at 7515 Harvest Road, Prince George, Virginia.

Please note that this is a subsequent notification, and that the facility already has an existing EPA Identification Number. The primary reasons for this subsequent notification are to revise the facility's generator status to CESQG (formerly LQG), as well as to update the contact's name and address, the site's activities, and add several RCRA waste codes.

If there are any questions concerning this submittal, please feel free to contact me by telephone at 978-685-2124 extension 5342, by mail at 221 Sutton Street, North Andover, MA 01845, or by electronic mail at bellm@cleanharbors.com.

Sincerely,

Wallace M. Bell

Wallace M. Bell

Enclosure

cc w/ enclosure: John DiCarlo, CHESI

	❑ As a component of a Revised RCRA Hazardous Waste Part A Per ❑ As a component of the Hazardous Waste Report
2. Site EPA ID Number (page 14)	EPA ID Number VAD981750555
3. Site Name (page 14)	Name: Clean Harbors Environmental Services, Inc
4. Site Location Information (page 14)	Street Address: 7515 Harvest Road City, Town, or Village: Prince George — State County Name: Prince George — Zip C
5. Site Land Type (page 14)	Site Land Type: ☒ Private ❑ County ❑ District ❑ Federal ❑ In
6. North American Industry Classification System (NAICS) Code(s) for the Site (page 14)	A. 562910 — B. 42 C. — D.
7. Site Mailing Address (page 15)	Street or P. O. Box: 1501 Washington Street City, Town, or Village: Braintree State: MA Country: Norfolk — Zip C
8. Site Contact Person (page 15)	First Name: Wallace — MI: M — Last Phone Number: 978-685-2124 — Extension: 5342 — Emai
9. Operator and Legal Owner of the Site (pages 15 and 16)	A. Name of Site's Operator: Clean Harbors Environmental Services, Inc — Date 0 Operator Type: ☒ Private ❑ County ❑ District ❑ Federal ❑ In B. Name of Site's Legal Owner: Clean Harbors Environmental Services, Inc. — Date 09 Owner Type: ☒ Private ❑ County ❑ District ❑ Federal ❑ India

ID NO: VAD 988 175 955

OMB#: 2050-0028 Expires 1/31/2006

9. Legal Owner (Continued) Address		
	Street or P. O. Box: 1501 Washington Street	
	City, Town, or Village: Braintree	
	State: MA	
	Country: Norfolk	Zip Code: 02189

10. Type of Regulated Waste Activity
Mark "Yes" or "No" for all activities; complete any additional boxes as instructed. (See instructions on pages 16 to 20.)

A. Hazardous Waste Activities
Complete all parts for 1 through 6.

Y ☒ N ☐ **1. Generator of Hazardous Waste**
If "Yes", choose only one of the following - a, b, or c.

☐ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or

☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or

☒ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities.

Y ☐ N ☒ d. United States Importer of Hazardous Waste

Y ☐ N ☒ e. Mixed Waste (hazardous and radioactive) Generator

Y ☐ N ☒ **2. Transporter of Hazardous Waste**

Y ☐ N ☒ **3. Treater, Storer, or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

Y ☐ N ☒ **4. Recycler of Hazardous Waste (at your site)**

Y ☐ N ☒ **5. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark each that applies.
☐ a. Small Quantity On-site Burner Exemption
☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☒ **6. Underground Injection Control**

B. Universal Waste Activities

Y ☐ N ☒ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. If "Yes", mark all boxes that apply:**

	Generate	Accumulate
a. Batteries	☐	☐
b. Pesticides	☐	☐
c. Thermostats	☐	☐
d. Lamps	☐	☐
e. Other (specify) _____	☐	☐
f. Other (specify) _____	☐	☐
g. Other (specify) _____	☐	☐

Y ☐ N ☒ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities
Mark all boxes that apply.

Y ☐ N ☒ **1. Used Oil Transporter**
If "Yes", mark each that applies.
☐ a. Transporter
☐ b. Transfer Facility

Y ☐ N ☒ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark each that applies.
☐ a. Processor
☐ b. Re-refiner

Y ☐ N ☒ **3. Off-Specification Used Oil Burner**

Y ☒ N ☐ **4. Used Oil Fuel Marketer**
If "Yes", mark each that applies.
☒ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
☒ b. Marketer Who First Claims the Used Oil Meets the Specifications

EPA ID NO: VAD 988 175 055

OMB#: 2050-0028 Expires 1/31/2006

11. Description of Hazardous Wastes (See instructions on page 20.)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

D001	D002	D008	D018	F001	F002	F003
F005						

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See instructions on page 20.)

Clean Harbors Environmental Services, Inc. is submitting this subsequent notification to notify that the facility is a CESQG of hazardous waste, and to update the site contact person information, activities, and waste codes.

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. **(See instructions on page 20.)**

Signature of operator, owner, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
Wallace M Bell	Wallace M. Bell, Corporate Compliance Manager	05/14/2004

EPA

ACKNOWLEDGEMENT OF SUBSEQUENT NOTIFICATION OF REGULATED WASTE ACTIVITY (VERIFICATION)

This is to acknowledge that we have updated our records to reflect the information supplied on a Subsequent Notification of Regulated Waste Activity for the Installation located at the address shown below. This is in compliance with Section 3010 of the Resource Conservation and Recovery Act (RCRA). Your EPA Identification Number for that installation is identified below.

Date:
06/11/04

Installation Name:
Clean Harbors Environmental Services, Inc.

EPA ID No.:
VAD988175055

Installation Address:
7515 Harvest Road
Prince George, VA 23875

Contact / Mailing Address:
Wallace M. Bell
Clean Harbors Environmental Services, Inc.
1501 Washington St.
Braintree, MA 02184