N60478.AR.000268
NWS EARLE
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REPORT ON
ENVIRONMENTAL SITE EVALUATION
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

by

Haley & Aldrich, Inc.
Cambridge, Massachusetts

for

Anderson-Nichols & Co.
Boston, Massachusetts

File No. 11135-40
September 1993

HALEY & ALDRICH INC.

Geotechnical Engineers &
Environmental Consultants

17 September 1993
File No: 11135-40

Anderson-Nichols & Company, Inc.
31 St. James Avenue
Boston, Massachusetts 02116

Attention: Mr. Jonathan Warburg

Subject: Environmental Site Evaluation
Proposed Hazardous Waste Storage Facility
Naval Weapons Station Earle
Colts Neck, New Jersey

Gentlemen:

Haley & Aldrich, Inc. (H&A) is pleased to present this report concerning the environmental site evaluation conducted at the proposed hazardous waste facility site located within the Naval Weapons Station (NWS) Earle in Colts Neck, New Jersey. The Scope of Services is outlined in the Amendment No. 20, Appendix "S", Statement of Architect-Engineer (A/E) Services under Indefinite Quantity A/E Contract 62472-92-D-1300, Various Repairs/ Alterations/New Construction Projects, State of New Jersey, for the Hazardous Waste Storage Facility (P-482) NWS Earle, Colts Neck, New Jersey.

PROJECT BACKGROUND

The US Navy is in the process of designing a new hazardous waste storage facility for the storage of hazardous waste in excess of 90 days. We understand that this project will involve the construction of a 5000 square-foot, one-story masonry/steel building, including a small office area, equipment storage, and a change room/shower room/toilet. The facility will be serviced by electricity, natural gas, and public water and sewerage services. When constructed and permitted, the facility will be used for hazardous waste storage in lieu of the currently used QH-8 quonset hut and the Demil Pad. The quonset hut and the Demil Pad will subsequently be decommissioned and closed pursuant to the closure plans on file with the New Jersey Department of Environmental Protection and Energy (NJDEPE). A closure plan for the newly constructed facility will also be prepared and submitted to the NJDEPE for review under the terms of a Major Modification to a RCRA Part B Permit. Work associated with the Major Modification is under a separate work scope.

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PURPOSE AND SCOPE

Prior to construction of the hazardous waste storage facility, NWS Earle requested that an environmental site evaluation of the proposed construction site was be conducted, including collection of subsurface soil and groundwater samples for chemical analyses. The evaluation included a site walk-over, a review of readily available information concerning the site geology and groundwater conditions in the area of the site, a review of available NJDEPE files for the site and the immediate vicinity, and a review of the applicable NJDEPE regulations with regard to the permitting of the new facility and the closure of the existing hazardous waste storage areas.

SITE LOCATION AND DESCRIPTION

The NWS Earle is located in Earle and Colts Neck, Monmouth County, New Jersey (Figure 1). The main base gate is located to the South of Route 18, at the intersection of Route 34 and Asbury Avenue. Topographically, the NWS area is generally of low relief, with areas of low, rolling terrain.

The Base was commissioned in 1943 and was most active during World War II. The principle mission of the Base is the storage, maintenance, renovation and control of munitions. Congress directed the US EPA to develop a comprehensive national program to manage past disposal sites under the 1980 CERCLA regulations. Named the Installation Restoration Program, its mission was to identify, report, and correct environmental deficiencies at Department of Defense facilities. NWS Earle has been and is part of the Installation Restoration Program, and has numerous sites across the base which are being investigated, or are scheduled for investigation under this and other federal programs.

NEW JERSEY DEPE FILE REVIEW

A file review was conducted at the NJDEPE offices in Trenton, New Jersey on 8 July 1993 by H&A personnel. Information from the files requested from the NJDEPE was received on 10 and 28 August 1993. NWS Earle has many individual parcels under investigation by the NJDEPE; a case manager has therefore been assigned to the Base. The case manager for the NWS Earle is Mr. Robert Marcolini, who provided information on site conditions to H&A.

Within the NJDEPE files was undated information regarding the Installation Restoration Program at NWS Earle. The Program

consisted of a Preliminary Assessment/Site Investigation)PA/SI) conducted in 1981. This PA/SI identified 29 possible contamination sources at the Base. The Program was designed to subsequently move to a Remedial Investigation/Feasibility Study stage, and finally to the initiation of Remedial Action Plans. Information in the file stated that in 1984 the NWS was "about to be added" to the National Priorities List (NPL), also known as Superfund. A review of the current NPL list shows the NWS Earle as an NPL site, with a final listing date of 30 August 1993.

A 1986 Weston Geophysical Company Interim Report - Confirmation Study gave a list of eleven sites investigated at the Base. The closest site to the subject site investigated during this time frame was Site 11 (Figure 2), the Contract Ordinance Disposal Area, approximately 0.4 miles east/southeast of the subject site. Based on groundwater flow directions provided in the Weston report, and the groundwater flow directions inferred from data from the subject site, Site 11 appears to be upgradient of the subject site. Site 11 is a two-acre site historically used by outside contractors to dispose of obsolete material using thermal destruction techniques. The area was also used as a fire-fighting training area for approximately three years. There were two unlined pits, approximately 30 feet in diameter and two feet deep in place at the Site during fire training operations. Oil soaked rejected airplanes and vehicles were placed in these pits and ignited. Contaminated soil was reportedly removed and the site regraded after 1977. Three groundwater monitoring wells were installed at Site 11. Groundwater flow directions were stated to be to the east with a north and south component. Oil & grease levels, decreasing with depth, were detected in the soil samples taken from Site 11. Groundwater samples contained elevated levels of nitrate/nitrite pentachlorophenol, TOH and TOC. Weston recommended the resampling of the wells, removal of "black soil", and the installation of an additional well because the groundwater flow directions were not as anticipated prior to the investigation. A note in the margin of a December 1988 Weston report entitled <u>Report of Current Situation and Draft Plan of Action</u> stated that Site 11 was of "medium environmental concern."

Also within the NJDEPE files was a report conducted by the Environmental Photographic Interpretation Center; Environmental Monitoring Systems Laboratory of Warrenton, Virginia under contract #68-03-3532 to the US EPA, dated October 1991. The analyses was performed at the request of the Superfund Support Section of US EPA Region II.

The analyses performed by the Center included a photogramatic interpretation of the site based on aerial photographs from the 1950s to the 1980s. The photos were from the US Geological Survey, US Department of the Interior, Aero Service Division of Weston Geophysical Company, and the Agricultural Stabilization and Conservation Service of the US Department of Agriculture. Based their interpretation of these photographs, the Center constructed an overlay to the four topographic maps covering the site area, depicting areas of potential environmental concern based on interpretations of the aerial photographs. Figure 2 shows the portion of the overlay pertaining to the general area of and surrounding the proposed construction. The southern portion of Area C is the proposed construction site.

The information contained on Site C in the report by the Environmental Photographic Interpretation Center stated the following:

1953 aerial photograph: The area appeared to be open storage for vehicles and equipment; dark stained areas were visible on the photos.

1961 aerial photograph: The area remained open storage. Light- and dark-toned materials were present; possibly a fill area. The Center stated that "classification bins" were visible.

1974 aerial photograph: The area remained open storage. A variety of objects can be observed on the photos, as well as light- and dark-toned mounded material. The Center stated "probable dark-toned stains" were observed in the photo.

1981 aerial photograph: The area remained open storage. The Center reported that mounded material, debris and probable dark-toned stains were visible on the photos.

1987 aerial photograph: The southern portion of the site remained open storage (this is the proposed construction site for the new hazardous waste storage facility). The Center stated that the northern portion of Area C was fill.

Site D, located to the west of the subject site, was listed as a fill area, disposal area and open storage. The Center's photographic analyses concluded that in 1953 buildings and a possible impoundment were present in the area. In 1961 the area is listed as a fill, and probable disposal area. From the 1974, 1981 and 1987 photos, the area was described as a parking area.

Site E, located south of Site D, was listed as an open storage area, with some vehicle and equipment storage. A variety of objects and light-tones stains were observed by the Center in the 1981 photo.

Site 29, located to the south of the subject site and to the east of Site E, was listed in the Center's report as the site of a PCB spill. The date of the spill was not given, but the report stated that the spill was cleaned-up by removing contaminated soil. The Center's historical analyses stated that evidence of the spill was not detected on the aerial photographs, and that the location was approximated. A 7 November 1985, Hazardous Ranking System (HRS) scoring package was also in the NJDEPE files. Information in the package stated that the PCB spill was cleaned up within five days of its occurrence and that 120 ft^3 of contaminated soil was excavated and transported off-site for disposal.

Groundwater flow direction in the site vicinity is estimated from depth to groundwater measurements taken at the site to be to the northeast. Sites D, E, and 29 appear to be downgradient or crossgradient from the subject site, based on these flow directions. This is a different flow direction than was indicated on a topographic map found in the NJDEPE files. The topographic map was marked to indicate that the regional groundwater flow at the site is to the southeast along the flow path of the Shark River. There were no notations on the map as to the source of this information.

A 10 May 1990 memo from the NJDEPE stated that the PCB spill may require further NJDEPE involvement. A 4 March 1993 letter from the Department of the Navy to Mr. Paul Ingrisano of the US EPA Region II states that the Navy "feels no further action is appropriate" at Sites C and 29. The letter also states the intention of the Navy to construct the new hazardous waste facility on the subject site. The letter closes with the statement that if no comments are received from the EPA within 30 days, the Navy will conclude that the No Further Action decision has been accepted by the EPA. There was no further correspondence in the file. This letter is provided in Appendix A.

Site F, located to the southeast, and in a potentially upgradient location, is listed by the Center as the Railroad Classification Yard. The site was reported as being approximately 10 acres in area. All of the aerial photographs used for the interpretation,

1953, 1961, 1974, 1981 and 1987, showed a maintenance building, open storage and dark-toned staining. The Center reported that the 1961 and 1974 photos also indicated possible standing liquid.

REGULATORY REVIEW

During the course of this evaluation, various conversations were held between H&A and personnel at NJDEPE. The RCRA status of NWS Earle is reviewed by the Hazardous Waste Branch of the NJDEPE. Mr. John Scott, an engineer with the Branch, has been working with personnel at NWS Earle for the review of RCRA issues as they pertain to the entire base. Mr. Scott provided H&A with the appropriate information and requisite forms regarding the necessary regulatory changes to be made at the site in preparation for the closure of the currently used hazardous waste facilities, and the opening of the proposed facility. According to Mr. Scott, an application for a Major Modification to the RCRA Part B Permit already in place at the base must be filed with the NJDEPE prior to the construction of the newly proposed facility and/or the decommissioning of the currently used hazardous waste facilities. The Major Modifications include the preparation of a closure plan for the proposed facility. The information needed on the Major Modification has been provided to H&A by Mr. Scott, and is provided as Appendix B. Project designs and a proposed construction schedule must be submitted along with the application information and a $3500 fee to the NJDEPE for review. The review by NJDEPE is anticipated to take approximately 30 to 60 days. After the review, a 45-day public comment period is open, after which the NJDEPE reviews the public comments, and issues a finalized permit for a final project design. The finalized permit with comments on the design are issued to NWS Earle for completion of a final design based on the permit conditions. The final project design must be signed and sealed by a New Jersey Registered Professional Engineer. Mr. Scott advised that a meeting be held to discuss the completed application prior to its submittal, so that any potential deficiencies or problems can be noted and corrected prior to the start of the formal review process.

Because the design can be altered during the review process based on regulatory changes and/or public comments, it is advised that construction of the project begin only after the final Major Modifications to the RCRA Part B Permit have been received from the NJDEPE. If operations at the NWS Earle are such that hazardous waste will continue to be stored on-site for over 90-days, the currently used hazardous waste storage facilities

should remain open until the newly proposed facility is completed and operational, and then decommissioned. The Navy can, however, close the currently used hazardous waste storage facilities prior to the completion of the proposed facility, if hazardous wastes generated at the Base are removed off-site within the 90-day time limit stipulated in the regulations.

Mr. Scott advised that approximately six months should be allowed between the submission of the project design and the issuance of the final permit. As the Hazardous Waste Branch of the NJDEPE works on a quarterly basis, reviews are scheduled to be completed during annual quarters. Mr. Scott also stated that these reviews are conducted after the request for a review is recorded and placed on the NJDEPE quarterly calendar. He recommended that the review of the Major Modification to the RCRA Part B Permit held by NWS Earle be placed on the NJDEPE schedule for the quarter beginning 1 October 1993, so that the review could be conducted during that quarter. In order for the review to be entered on the NJDEPE schedule, H&A informed Mr. Scott that, assuming modification of the contract, the Major Modification is anticipated to be delivered to his office for review during that 1 October through 31 December 1993 quarter. The scope of work related to the Major Modification to the current RCRA Part B Permit held by NWS Earle has been prepared by Haley & Aldrich, Inc. and presented under separate cover to Anderson-Nichols & Company, Inc. in a proposal dated 14 June 1993. If the scope of work in the 14 June 1993 proposal is approved on or before 15 October 1993, the review can be completed for submission to NJDEPE during the 1 October through 31 December 1993 quarter.

PRESENT SITE CONDITIONS

A site walkover was conducted on 6 and 7 May 1993 by H&A personnel. The proposed construction site is approximately 150 feet by 75 feet, with an area of approximately 11,250 square feet. A railroad spur, from a north-south running railroad line, and wetlands are located to the east of the site, and Saipan Road to the west. Further to the southeast, the railroad line ends at a railyard. To the west of Saipan Road, across from the site, is a paved storage area. On the day of the site visit, various large-diameter containers were being stored in the area. Beyond the storage area were wetlands. A wood-frame building, No. S-83, reportedly used for the storage of wood and construction materials is located to the south of the site. A dumpster was located immediately north of S-83. Construction-type debris and

cardboard was observed in the dumpster. Access to this building could not be obtained.

Topographically, the site is fairly level and at a grade similar to Saipan Road. Portions of the site were overgrown with weeds and other vegetation. Some areas were topped with gravel and stone, and a portion of the site is asphalt-paved with a chain-link fence and gate. Within the chain-link fence were stored a variety of items. On the day of the site visit, a variety of materials were observed stored on the site, including out-of-service transformers, toilets, sheet metal, piping, lumber, metal pillars of the type used to mount outdoor light fixtures or signs, and other construction related materials.

There was no evidence of stressed vegetation or soil staining observed in the area of the proposed construction. Soil staining was observed along the railroad line. There were no buildings or other structures observed on the site. Utility lines, including sewer and water, run from south to north along Saipan Road to the boundary of the site. An Anderson-Nichols civil engineer reported that these lines would need to be extended to service the proposed hazardous waste storage facility.

An area within the chain-link fence, to the north of the site, was reported by NWS Earle personnel to be the site of an historic PCB spill, which was subsequently "cleaned up." As previously stated, NJDEPE records indicate that a PCB spill occurred in an area to the south of the site, although the NJDEPE files indicate that the exact location was not known.

SUBSURFACE EXPLORATIONS AND FIELD INVESTIGATIONS

Seven test borings were completed at the site during the period 29 June to 2 July 1993 by Warren George, Inc., Jersey City, New Jersey. The test borings were conducted to evaluate subsurface conditions for foundation design and to describe, classify and evaluate on-site surficial soils as to the presence of oil and hazardous materials. The borings were located around the perimeter and within the limits of the proposed building and were drilled to depths ranging from 17 to 42 feet below ground surface (see Figure 3 for test boring locations). Groundwater monitoring wells were installed in six of the seven completed borings (MW-1 to MW-6) to observe site groundwater levels and to sample groundwater for chemical analysis. Boring B2 was drilled to observe the deeper subsurface conditions at the site for geotechnical purposes. No monitoring well was installed in B2.

The borings were advanced using a 4-1/4 in. inside diameter hollow-stem auger. A standard 1-3/8 in. inside diameter split-spoon sampler was used to obtain soil samples nearly continuously from ground surface to a depth of approximately 10 ft., and at standard 5 ft. sampling intervals thereafter. No soil samples were collected for chemical analysis from boring B2 completed for geotechnical purposes. Soil samples collected during the exploration program were screened in the field using a HNu Systems, Inc. photoionization detector (PID) and observed for visual evidence of contamination. Potentially contaminated samples were selected for laboratory analysis.

Table I summarizes subsurface information obtained during the exploration program. PID screening results are provided in Table II. Test Boring Reports describing the subsurface conditions encountered at each boring location are provided in Appendix C. Groundwater Monitoring Well Installation Reports, describing the construction details of each monitoring well, Groundwater Monitoring Reports summarizing measured groundwater levels, and well permits are provided in Appendix D.

SUBSURFACE GEOLOGY

The completed subsurface explorations show that the site is underlain by at least three different soil strata. The following units have been encountered at the site in order of increasing depth below ground surface. Refer to Appendix C for Test Boring Reports.

Miscellaneous Fill

Alluvium

Coastal Plain Sediments

A. Miscellaneous Fill

Miscellaneous fill material was encountered in all of the test borings ranging in thickness from approximately 5.5 to 8 ft. The fill was typically described as loose to very dense, dark brown, silty fine SAND, little coarse to medium sand, fine gravel, concrete fragments, asphalt, glass shards, cinders, clay and trace loam. Obstructions were encountered in the fill at shallow depth.

B. Alluvium

The alluvial deposits ranged in thickness from 0.5 to 3.5 ft. and contained two distinct layers. The layer located immediately below the fill typically contained organics and was described as loose to medium dense, dark brown to black organic silty fine SAND, trace to little roots. The deeper alluvial deposit typically contained less organic matter and was described as loose to medium dense gray to dark brown silty fine SAND, little clay, trace roots, organics.

C. Coastal Plain Sediments

The coastal plain deposits are characterized by fine and coarse to fine sands encountered below the silty fine alluvial sands. Test boring B2 penetrated 33 ft. of the coastal plain sands. The coastal plain deposits were generally described as medium dense to dense yellow-brown to brown fine SAND and coarse to fine SAND, trace to little medium sand, trace to little fine gravel.

FIELD SCREENING

Soil was sampled nearly continuously as the borings were advanced through the miscellaneous fill and into the naturally deposited soils. Unless otherwise noted on Table II, samples were immediately placed into clean, glass, screw-top jars, covered with aluminum foil, and capped. The accumulated air above the soil samples in the jar (headspace) was analyzed using a PID equipped with a 10.2 eV lamp. This instrument uses ultraviolet light to ionize organic volatile vapors present in the headspace of the sample. Positive ions are attracted to an electrode having an applied negative potential. The current measured at the electrode is proportional to a concentration of gas. The instrument is calibrated to a benzene equivalent and provides a qualitative indication of the presence of volatile organic vapors in the sample.

Soil field screening results are presented in Table II. The readings for the collected samples were generally within 1 or 2 parts per million (ppm) of background levels. The highest observed reading (2.8 ppm) was recorded from a soil sample collected near the water table in boring MW-5 (Table II). No visual or olfactory indications of contamination were recorded on the boring logs. The coastal plain sediments below the water table showed PID readings generally equivalent to recorded

background levels. Slightly elevated readings were recorded for samples of the fill material and soils collected near the water table.

GROUNDWATER MONITORING WELL INSTALLATION

Groundwater monitoring wells were installed in six of the seven completed borings on the site and are designated "MW" on Figure 3. Monitoring wells were constructed using a length of 2.0 in. inside diameter, machine slotted, PVC well screen attached to a length of solid PVC riser pipe. The well screen extends above the water table to permit observation and measurement of the groundwater surface and to monitor the wells for the possible presence of phase-separated or "free" product floating on the water table. The monitoring wells were installed at depths ranging from 13.8 ft. to 17.5 ft. below ground surface and are screened in both the miscellaneous fill and the naturally deposited soils. Groundwater Monitoring Well Installation Reports and Groundwater Monitoring Reports are included in Appendix D.

ELEVATION SURVEY

An elevation survey was conducted by Haley & Aldrich, Inc. followed by a round of water levels on 7 and 8 July 1993. The results of the survey and the water level data have provided reference elevations for each well location and have provided groundwater surface elevation data (Appendix D). Roadbox rim elevations were measured relative to a site benchmark designated as 100.00 ft. Based on the groundwater elevation data, depth to groundwater generally varies by less than 0.5 ft. in the vicinity of the site and generally flows from southeast to northwest, toward nearby wetlands.

GROUNDWATER SAMPLING

The monitoring wells were sampled approximately one week after installation to allow for equilibrium conditions to become established. Prior to sampling, the depth to water in the monitoring wells were measured using an electronic water level indicator. The volume of standing water in the monitoring wells was calculated and at least three well volumes of water were removed from the wells prior to collecting the sample. A dedicated Waterra tubing inertial pump system was installed in the wells to avoid cross-contamination between wells during the sampling procedures.

Groundwater samples were collected in preserved and pre-cleaned glassware supplied by the analytical laboratory. The samples were stored in a cooler with ice during transport to the analytical laboratory. The samples were submitted under Chain-of-Custody documentation to ANALab, Inc., a State of New Jersey approved analytical laboratory. The groundwater samples were analyzed for acid and base/neutral extractable compounds (ABNs), Priority Pollutant metals, polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs). Groundwater samples analyzed for Priority Pollutant metals were not field filtered to remove silt prior to submittal and therefore represent total concentrations of metals in the sample.

SOIL ANALYTICAL RESULTS

Thirteen of the soil samples collected during the test boring program were selected for chemical analysis conducted by ANALab, Inc. Samples were selected based on field visual observations, field PID screening results, the soil stratum, and the relative position of the sample location to the water table. The soil sample analytical results are summarized in Table III. Laboratory chemical analysis reports and chain of custody documentation are included in Appendix E.

A. Volatile Organic Compounds (VOCs)

Trace levels, defined as concentrations identified below the method detection limit, of several VOCs were identified in soil samples submitted for analysis. Trace levels of acetone and methylene chloride were identified in many of the submitted samples (Table III). These chemical compounds are also common laboratory contaminants. Additionally, trace levels of toluene, ethylbenzene and xylenes, compounds which are commonly attributed to contamination by fuels, were detected in shallow samples from MW-1 and MW-5. Trace levels of the chlorinated compound, 1,2-dichloroethane were detected in soils from MW-3. Concentrations of VOCs detected in the submitted soil samples were generally trace levels at concentrations below New Jersey Subsurface Soil Standards (Table III).

B. Acid and Base Neutral Extractable Compounds (ABNs)

Trace to low levels of ABNs were detected in samples of the fill material and shallow natural soils collected from the borings. The shallow fill (4 to 8 ft.) in borings MW-1 and

MW-3, located adjacent to a railroad track spur, had the highest concentration of ABNs (a total concentration of 58 ppm, MW-1, and 40 ppm, MW-3). These levels are below New Jersey Subsurface Soil Standards which range from 100 to 500 ppm per ABN compound (Table III). The deeper natural soils and MW-6 were relatively free of ABN contamination (Table III).

C. Priority Pollutant Metals

Low levels of metals, the majority of which fall within published background levels for New Jersey, were detected in samples of the fill material from borings MW-1, MW-3 and MW-4. In general, the levels of metals in the deeper, naturally deposited soils are shown to drop to relatively low levels (Table III) and were found in many cases to be lower than the levels within the fill material. Action values for metals contamination in soil in New Jersey are considered on a case-by-case basis.

D. Pesticides and PCBs

Low levels of pesticides including DDD and DDT were detected in fill material from boring MW-1 and MW-4. The highest concentration (2 ppm) of DDT was detected in soil collected from 4 to 6 ft. in MW-1. This concentration is below New Jersey Subsurface Soil Standards of 100 ppm. PCBs were detected at depths between 6 and 10 feet in soil samples from boring MW-5 (3500 ppb). This concentration is also below state subsurface soil standards (100 ppm).

GROUNDWATER ANALYTICAL RESULTS

The results of the groundwater chemical testing program are provided in Table IV. Laboratory data reports and chain of custody documentation are provided in Appendix F. Groundwater from the monitoring wells at the site was analyzed for the same parameters as the soil samples.

Groundwater at the site was shown to contain trace to low levels of VOCs, ABNs and total metals and no detectable concentrations of pesticides or PCBs. Elevated levels of vinyl chloride and cis/trans 1,2-dichloroethene (DCE) were detected in groundwater collected from MW-4 (30 ppb and 25 ppb, respectively). The level of vinyl chloride exceeds both the New Jersey Groundwater Cleanup Standard for Class IIA groundwater and the EPA Maximum

Contaminant Level (MCL) of 2 ppb. The level of DCE detected exceeds the New Jersey standard of 10 ppb, but is below the EPA MCL of 70 ppb.

Trace levels of ABNs were detected in groundwater from MW-3, MW-5 and MW-6. Levels of total lead and total chromium in five of the samples from the six monitoring wells exceeded state cleanup criteria of 10 and 100 ppb, respectively (Table IV). These samples were not filtered during collection and thereby represent total metal concentrations in the sample.

DISCUSSION

Based on the available data, overall site subsurface conditions are largely related to the quality of the fill material at the site. Borings MW-2 and MW-5 showed an isolated elevated concentration of methylene chloride and several elevated ABN concentrations. Borings MW-1 and MW-3 showed elevated concentrations of ABNs and VOCs but the concentrations were below New Jersey Cleanup Standards. Metals were also detected, but generally at levels within the range of background values for soils in New Jersey. These borings are located adjacent to the railroad track spur and the contamination may reflect activities along the spur or the quality of the original fill material used in the construction of the spur. Pesticide concentrations detected in boring MW-1 may be the result of an historical surficial spill in the vicinity since elevated concentrations identified in the shallow fill (4 to 6 ft.) were observed to decrease with depth (Table III). Metal and ABN concentrations are low and probably reflect the quality of the fill in this area of the site. The boring logs document cinders and other debris within this material. ABNs are associated with cinders, fuels and other asphaltic materials.

PCBs were detected at depth in soil samples collected in boring MW-5 at depths between 6 and 10 feet. PCBs were not detected in groundwater samples collected from this location. The concentration of PCBs increased with depth from 21.8 ppb in the 6 to 8 foot interval to 3550 ppb in the 8 to 10 foot sample. As previously discussed, NJDEPE record indicated that a PCB spill occurred in an area to the south of the site, although the exact location was not known. NWS Earle personnel indicated that a PCB spill had occurred within the chain link fence to the north of the site. This report of an historic spill(s), the fact that the exact location of the spill is not known and the soil data from the site which indicated elevated levels of PCBs at 6 to 10 feet

in boring MW-5, suggests that the spill may have occurred on the site, and the PCB concentrations may represent residual levels left behind following remedial excavation activities reportedly conducted after the spill.

Groundwater contamination at the site is generally limited to elevated levels of vinyl chloride and cis/trans-1,2-dichloroethene identified in samples collected from MW-4, and elevated concentrations of chromium and lead in groundwater from the six monitoring wells. Since the metal concentrations represent total levels, the fill material may be a potential source of the metals in groundwater; however, the concentrations of the metals in the soil and the fact that the concentrations generally decrease with depth suggest that the metals concentrations in the groundwater are from an off-site source. No potential source for the VOC contamination in MW-4 has been identified. The DCE concentration of 9.9 ppb in MW-6 is close to the New Jersey Groundwater Cleanup Guideline of 10 ppb for cis -1,2 -dichloroethene. This value is below the New Jersey Standard for trans -1,2 -dichloroethene and the U.S. EPA MCLs for both compounds. The VOCs may represent degradation products from an off-site upgradient source of chlorinated VOC contamination.

The Groundwater Cleanup Standards listed on Table IV are for Class IIA Groundwater, which are those groundwater resources not within the Pinelands Protection Area to used for drinking water sources. However, the regulations stipulate that contamination levels in groundwater which has the potential to migrate to an ecosystem such as a wetland, will be developed by the NJDEPE on a site-specific basis.

CONCLUSIONS AND RECOMMENDATIONS

Based on currently available information, the following conclusions are made:

- Soil quality at the site is likely related to the quality of fill originally placed at the site, use of the abutting railroad spur, and potential spills of pesticides and PCBs. Levels of soil contamination are below New Jersey Subsurface Soil Standards (Table III).

- Groundwater contamination is generally limited to elevated concentrations of vinyl chloride and cis/trans-1,2-dichloroethene identified in MW-4 and elevated levels of

total chromium and total lead in groundwater samples from each of the monitoring wells.

Construction activities at the site will involve the recommended excavation of 8 to 9 ft. of unsuitable fill and organic alluvial material prior to the placement and compaction of granular fill material under the entire proposed building footprint. Excavation dewatering will also be required based on the observed groundwater elevations in order to keep construction activities in the dry. It is recommended that an Excavated Soil Material Management Plan (ESMMP) be developed prior to construction activities. This plan will define soil handling procedures, screening criteria, criteria for on-site reuse of excavated material, soil disposal criteria and health and safety issues to be used at the site during construction. This plan can be addressed by the consultant overseeing the environmental conditions during construction.

In addition to necessary soil handling procedures, excavation dewatering may require treatment prior to discharge based on the identified levels of VOCs and metals and depending on the point of discharge. Groundwater treatment and discharge criteria should be developed by the consultant overseeing the environmental conditions during construction in conjunction with the NJDEPE case manager for the NWS Earle site, and if necessary the US EPA contact, to ensure compliance with applicable New Jersey and Federal regulations and permitting requirements.

Construction at sites where contamination has been discovered is regulated by the Site Remediation Branch of the NJDEPE. The case manager, Mr. Robert Marcolini, should be contacted and the contents of this report discussed with him and other NJDEPE personnel, as appropriate. Mr. Marcolini has stated that sites such as the NWS Earle are dealt with on a case-by-case basis, and as the case manager, he will aid both the NWS Earle personnel and their consultants through the regulatory requirements during construction at the site. Furthermore, Mr. Paul Ingrisano of the US EPA Region II, the Federal environmental site manager, should also be informed of this information and the proposed construction at the site. The previously discussed 4 March 1993 memo from the Department of the Navy to the Mr. Ingrisano (Appendix A), states that five soil borings will be conducted at the site and the soils submitted for Toxicity Characteristic Leaching Procedure (TCLP) analyses. TCLP analyses was not requested during the investigation conducted by H&A, and therefore this test procedure was not conducted. However, TCLP

procedures are generally conducted when soils from a site contain levels of contamination which warrant their excavation and off-site disposal at a hazardous waste landfill and laboratory data is needed for disposal criteria. The soils from the subject site analyzed during this investigation did not exhibit the levels of contamination for which TCLP procedures would be required.

LIMITATIONS

This letter has been prepared for the exclusive use of Anderson-Nichols & Company, Inc. The conclusions provided are based solely on the scope of work conducted and the sources of information referenced in this letter. Any additional information that becomes available should be provided to Haley & Aldrich, Inc. so that our conclusions may be reviewed and modified as necessary.

The work performed by Haley & Aldrich, Inc., is subject to the terms and conditions stated in our proposal dated, 26 January 1993. This work has been undertaken in accordance with generally accepted environmental consulting practices. No other warranty express or implied, is made. The results of this evaluation may not fully comply with ASTM E 1527-93, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process".

The contents of this report may not be copied, provided or otherwise communicated, in whole or in part, to any other party other than the United States Navy without the prior written consent of Haley & Aldrich, Inc.

Please do not hesitate to contact us should you have any questions or require any additional information concerning this project.

Sincerely yours,
HALEY & ALDRICH, INC.

J. McLing for

John P. Fitzgerald
Staff Environmental
Geologist

Veronica Wancho O'Donnell

Veronica Wancho O'Donnell
Senior Environmental
Geologist

William W. Beck, Jr.
Vice President

Enclosures

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Appendix A	-	NJDEPE Correspondence
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Appendix C	-	Test Boring Logs
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Appendix F	-	Groundwater Analytical Results and Documentation

VWO158.RPT:NWS:EARLE:nwassess.wpf

FILE NO.

HALEY & ALDRICH, INC.

TABLE I
SUMMARY OF SUBSURFACE EXPLORATIONS
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

Exploration Number	Ground Surface El., (ft.)	Depth of Exploration (ft.)	Thickness of Strata in Feet			Approx. El. Top of Coastal Plain Bearing Soils (ft.)	Approximate Groundwater Elevation
			Fill	Alluvium	Coastal Plain Sediments		
MW1	99	27	8.0	0.5	18.5+	90	88.6
MW2/B2	99	42	5.5	3.5	33+	90	88.4
MW3	99	27	6.0	2.0	19+	91	88.6
MW4	99	27	5.5	2.5	19+	91	89.2
MW5	99	17	6.5	2.5	8+	90	89.2
MW6	98.5	17	6.5	2.5	8+	89.5	88.8

NOTES:
1. Refer to Figure 3, "Site and Subsurface Exploration Location Plan," for locations of test borings.
2. Surface elevations and exploration locations were approximated by Haley & Aldrich, Inc., on 8 July 1993 from information given on the drawing by Anderson-Nichols & Co., Inc., entitled "Hazardous Waste Storage Facility, Grading, Drainage, and Landscaping Plan," received 2 July 1993.
3. All elevations are in feet and are referenced to the site grades given on the drawing referenced in Note 2.
4. All depths and thicknesses are in feet.
5. Elevations of below-grade strata are based on approximate depths below ground surface and should be considered very approximate.

File No. 11135-40
SRB003D:1113541T.WQ1

TABLE II
SUMMARY OF PHOTOIONIZATION DETECTOR SCREENING DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SAMPLE DESIGNATION	SAMPLING DATE	SAMPLE DEPTH (feet)	SOIL TYPE	SAMPLE READING (ppm)	BACK-GROUND READING (ppm)	SUBMITTED FOR CHEMICAL ANALYSES	COMMENTS
MW1-S1	01-Jul-93	1.0 - 3.0	FILL	0.2	0.2		
MW1-S2	01-Jul-93	4.0 - 6.0	FILL	0.2	0.2	X	screening of split spoon
MW1-S3	01-Jul-93	6.0 - 8.0	FILL	**1.2**	0.2	X	
MW1-S4	01-Jul-93	8.0 - 10.0	SILT/SAND	**1.2**	0.2	X	
MW1-S5	01-Jul-93	10.0 - 12.0	SAND	**1.3**	0.2		
MW1-S6	01-Jul-93	15.0 - 17.0	SAND	0.2	0.2		
MW1-S7	01-Jul-93	20.0 - 22.0	SAND	0.2	0.2		
MW1-S8	01-Jul-93	25.0 - 27.0	SAND	0.2	0.2		
MW2-S1	01-Jul-93	1.0 - 3.0	FILL	**0.8**	0.2		
MW2-S2	01-Jul-93	4.0 - 4.8	FILL	**1.0**	0.2		
MW2-S3	01-Jul-93	5.0 - 7.0	SILT/SAND	0.2	0.2		
MW2-S4	01-Jul-93	7.0 - 9.0	SILT/SAND	**0.3**	0.2	X	
MW2-S5	01-Jul-93	9.0 - 11.0	SAND	0.2	0.2	X	screening of split spoon
MW2-S6	01-Jul-93	15.0 - 17.0	SAND	0.2	0.2		
MW2-S7	02-Jul-93	20.0 - 22.0	SAND	0.3	0.3		
MW2-S8	02-Jul-93	25.0 - 27.0	SAND	0.3	0.3		
MW2-S9	02-Jul-93	30.0 - 32.0	SAND	0.3	0.3		
MW2-S10	02-Jul-93	35.0 - 37.0	SAND	0.3	0.3		
MW2-S11	02-Jul-93	40.0 - 42.0	SAND	0.3	0.3		
MW3-S1	30-Jun-93	0.0 - 2.0	FILL	**0.7**	0.2		
MW3-S2	30-Jun-93	2.0 - 4.0	FILL	**1.4**	0.2		
MW3-S3	30-Jun-93	4.0 - 6.0	FILL	0.2	0.2	X	screening of split spoon
MW3-S4	30-Jun-93	6.0 - 8.0	SILT/SAND	**1.7**	0.2		
MW3-S5	30-Jun-93	8.0 - 10.0	SAND	0.2	0.2	X	
MW3-S6	30-Jun-93	15.0 - 17.0	SAND	0.2	0.2		
MW3-S7	30-Jun-93	20.0 - 22.0	SAND	0.2	0.2		
MW3-S8	30-Jun-93	25.0 - 27.0	SAND	0.2	0.2		

(continued)

TABLE II (continued)
SUMMARY OF PHOTOIONIZATION DETECTOR SCREENING DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SAMPLE DESIGNATION	SAMPLING DATE	SAMPLE DEPTH (feet)	SOIL TYPE	SAMPLE READING (ppm)	BACK-GROUND READING (ppm)	SUBMITTED FOR CHEMICAL ANALYSES	COMMENTS
MW4-S1	30-Jun-93	0.0 - 2.0	FILL	**0.4**	0.2		
MW4-S2	30-Jun-93	2.0 - 4.0	FILL	**0.6**	0.2	X	
MW4-S3	30-Jun-93	4.0 - 6.0	SILT/SAND	**0.5**	0.2		
MW4-S4	30-Jun-93	6.0 - 8.0	SILT/SAND	**0.3**	0.2		
MW4-S5	30-Jun-93	8.0 - 10.0	SAND	0.2	0.2	X	
MW4-S6	30-Jun-93	15.0 - 17.0	SAND	0.2	0.2		
MW4-S7	30-Jun-93	20.0 - 22.0	SAND	0.2	0.2		
MW4-S8	30-Jun-93	25.0 - 27.0	SAND	0.2	0.2		
MW5-S1	29-Jun-93	0.0 - 2.0	FILL	0.4	0.4		
MW5-S2	29-Jun-93	2.0 - 4.0	FILL	**0.6**	0.4		
MW5-S3	29-Jun-93	6.0 - 8.0	SILT/SAND	**2.8**	0.4	X	
MW5-S4	29-Jun-93	8.0 - 10.0	SAND	**2.0**	0.4	X	screening of split spoon
MW5-S5	29-Jun-93	15.0 - 17.0	SAND	0.4	0.4		
MW6-S1	29-Jun-93	0.0 - 2.0	FILL	**1.0**	0.4		
MW6-S2	29-Jun-93	2.0 - 4.0	FILL	**0.8**	0.4	X	
MW6-S3	29-Jun-93	4.0 - 6.0	FILL	**0.6**	0.4		
MW6-S4	29-Jun-93	6.0 - 8.0	SILT/SAND	**1.2**	0.4	X	
MW6-S5	29-Jun-93	10.0 - 12.0	SAND	0.4	0.4		
MW6-S6	29-Jun-93	15.0 - 17.0	SAND	0.4	0.4		

NOTES AND ABBREVIATIONS

1. ppm: parts per million.
2. Readings taken with an HNU Systems Model PI-101 photoionization detector equipped with an 10.2 eV lamp.
3. Readings taken of the headspace in soil sample jars covered with aluminum foil unless otherwise indicated.
4. Readings represent concentrations of total volatile organic compounds in headspace air as compared to a benzene-equivalent standard.
5. Readings taken in field.
6. PID calibrated prior to use in accordance with manufacturer's specifications.
7. Background readings represent instrument response in ambient air prior to insertion of probe into sample headspace.

VWO:NWSEARLE:USNPID.WQ1

TABLE III
SUMMARY OF SOIL QUALITY DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SAMPLE DESIGNATION	MW1-S2	MW1-S3	MW1-S4	MW2-S4	MW2-S5	MW3-S3	MW3-S5	NEW
SAMPLING DATE	01-Jul-93	01-Jul-93	01-Jul-93	01-Jul-93	01-Jul-93	30-Jun-93	30-Jun-93	JERSEY
SAMPLE DEPTH (feet)	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	7.0 - 9.0	9.0 - 11.0	4.0 - 6.0	8.0 - 10.0	SUBSURFACE
GROUNDWATER DEPTH (feet)	10.4	10.4	10.4	10.6	10.6	10.4	10.4	SOIL
SOIL TYPE	FILL	FILL	SILT/SAND	SILT/SAND	SAND	FILL	SAND	CRITERIA
VOLATILE ORGANIC COMPOUNDS (ug/kg)								
methylene chloride	**7.5**	**4.0(TR)**	**4.3(TR)**	**6.6**	ND	**4.0(TR)**	**3.4(TR)**	10000
acetone	ND	ND	ND	**4.9(TR)**	**31(TR)**	ND	ND	50000
1,2-dichloroethane	ND	ND	ND	ND	ND	**1.2(TR)**	**21(TR)**	1000
2-butanone	ND	ND	ND	ND	ND	ND	ND	50000
toluene	**2.6(TR)**	ND	ND	ND	ND	ND	ND	500000
ethylbenzene	**1.3(TR)**	ND	ND	ND	ND	ND	ND	100000
m/p xylenes	**1.7(TR)**	ND	ND	ND	ND	ND	ND	10000(total)
ACID & BASE/NEUTRAL EXTRACTABLE COMPOUNDS (ug/kg)								
naphthalene	ND	ND	ND	ND	ND	**1080**	ND	100000
acenaphthene	ND	ND	ND	**50.2(TR)**	ND	**1130**	ND	100000
fluorene	ND	ND	ND	**56.9(TR)**	ND	**1030**	ND	100000
phenanthrene	**125(TR)**	**1500(TR)**	ND	**434**	**133(TR)**	**5530**	ND	-
anthracene	ND	ND	ND	**142(TR)**	**44.4(TR)**	**2030**	ND	500000
fluoranthene	**277(TR)**	**4260**	ND	**517**	**203(TR)**	**6250**	ND	500000
pyrene	**173(TR)**	**2570**	ND	**421**	**115(TR)**	**4420**	ND	500000
benzo (a) anthracene	**241(TR)**	**3870**	ND	**189(TR)**	**70.2(TR)**	**2710**	ND	500000
chrysene	**328(TR)**	**5270**	ND	**253(TR)**	**76.0(TR)**	**2940**	ND	500000
bis (2-ethylhexyl) phthalate	**559**	**384(TR)**	ND	**108(TR)**	**48.2(TR)**	**79.2(TR)**	**61.2(TR)**	100000
benzo (b) fluoranthene	**887**	**12900**	ND	**156(TR)**	**71.8(TR)**	**3290**	ND	-
benzo (k) fluoranthene	**1300**	**8070**	ND	**155(TR)**	**62.1(TR)**	**2500**	ND	500000
benzo (a) pyrene	**395**	**8120**	ND	**161(TR)**	**76.8(TR)**	**3030**	ND	100000
indeno (1,2,3-cd) pyrene	**921**	**6540**	ND	**86.2(TR)**	ND	**1760**	ND	500000
dibenzo (a,h) anthracene	**222(TR)**	**596(TR)**	ND	ND	ND	**240(TR)**	ND	500000
benzo (g,h,i) perylene	**273(TR)**	**4180**	ND	**75.1(TR)**	ND	**1650**	ND	500000
dibenzofuran	ND	ND	ND	ND	ND	**572**	ND	-
2-methyl naphthalene	ND	ND	ND	ND	ND	**334**	ND	-

(continued)

TABLE III (continued)
SUMMARY OF SOIL QUALITY DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SAMPLE DESIGNATION	MW1-S2	MW1-S3	MW1-S4	MW2-S4	MW2-S5	MW3-S3	MW3-S5	NEW
SAMPLING DATE	01-Jul-93	01-Jul-93	01-Jul-93	01-Jul-93	01-Jul-93	30-Jun-93	30-Jun-93	JERSEY
SAMPLE DEPTH (feet)	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	7.0 - 9.0	9.0 - 11.0	4.0 - 6.0	8.0 - 10.0	SUBSURFACE
GROUNDWATER DEPTH (feet)	10.4	10.4	10.4	10.6	10.6	10.4	10.4	SOIL
SOIL TYPE	FILL	FILL	SILT/SAND	SILT/SAND	SAND	FILL	SAND	CRITERIA
METALS (mg/kg)								
arsenic	**2.9**	**1.5**	ND	**1.8**	**1.2**	**2.5**	ND	*
beryllium	**0.22**	**0.24**	ND	ND	**0.13**	**0.29**	**0.12**	*
chromium	**26.5**	**19.5**	ND	**14.2**	**17.4**	**16.5**	**11.3**	*
copper	**50.4**	**11.9**	ND	ND	ND	**10.6**	ND	*
lead	**50.4**	**34.7**	ND	ND	ND	**48.2**	ND	*
nickel	**51.5**	ND	ND	ND	ND	ND	ND	*
zinc	**51.5**	**65.1**	**8.6**	**10.7**	**13.9**	**69.4**	**23.8**	*
PESTICIDES (ug/kg)								
pp'-DDD	**358**	**3.27(TR)**	ND	ND	ND	ND	ND	100000
pp'-DDE	**130(TR)**	ND	ND	ND	ND	ND	ND	100000
pp'-DDT	**2060**	**103**	ND	ND	ND	ND	ND	100000
PCBs (ug/kg)								
aroclor 1260	ND	ND	ND	ND	ND	ND	ND	100000

(continued)

HALEY & ALDRICH, INC.

TABLE III (continued)
SUMMARY OF SOIL QUALITY DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SAMPLE DESIGNATION	MW4-S2	MW4-S5	MW5-S3	MW5-S4	MW6-S2	MW6-S4	NEW
SAMPLING DATE	30-Jun-93	30-Jun-93	29-Jun-93	29-Jun-93	29-Jun-93	29-Jun-93	JERSEY
SAMPLE DEPTH (feet)	2.0 - 4.0	8.0 - 10.0	6.0 - 8.0	8.0 - 10.0	2.0 - 4.0	6.0 - 8.0	SUBSURFACE
GROUNDWATER DEPTH (feet)	9.8	9.8	9.8	9.8	9.7	9.7	SOIL
SOIL TYPE	FILL	SAND	SILT/SAND	SILT/SAND	FILL	SILT/SAND	CRITERIA
VOLATILE ORGANIC COMPOUNDS (ug/kg)							
methylene chloride	**3.3(TR)**	**3.0(TR)**	**11**	**5.3(TR)**	**5.1(TR)**	**5.5(TR)**	10000
acetone	ND	ND	**35(TR)**	ND	**6.3(TR)**	**61(TR)**	50000
1,2-dichloroethane	ND	ND	ND	ND	ND	ND	1000
2-butanone	ND	ND	**6.9(TR)****	ND	ND	ND	50000
toluene	ND	ND	**2.6(TR)**	ND	ND	**6.3**	500000
ethylbenzene	ND	ND	**2.1(TR)**	ND	ND	ND	100000
m/p xylenes	ND	ND	**2.7(TR)****	ND	ND	ND	10000(total)
ACID & BASE/NEUTRAL EXTRACTABLE COMPOUNDS (ug/kg)							
naphthalene	**70.4(TR)**	ND	ND	ND	ND	ND	100000
acenaphthene	ND	ND	ND	ND	ND	ND	100000
fluorene	ND	ND	ND	ND	ND	ND	100000
phenanthrene	**139(TR)**	ND	**60.1**	**63.6(TR)**	ND	ND	-
anthracene	ND	ND	ND	ND	ND	ND	500000
fluoranthene	**77.4(TR)**	ND	ND	**50.0(TR)**	ND	ND	500000
pyrene	**78.5(TR)**	ND	ND	ND	ND	ND	500000
benzo (a) anthracene	**55.7(TR)**	ND	ND	ND	ND	ND	500000
chrysene	**88.4(TR)**	ND	ND	ND	ND	ND	500000
bis (2-ethylhexyl) phthalate	**54.3(TR)**	**224(TR)**	ND	**52.2(TR)**	**77.8(TR)**	ND	100000
benzo (b) fluoranthene	**133(TR)**	ND	ND	ND	ND	ND	-
benzo (k) fluoranthene	**121(TR)**	ND	ND	ND	ND	ND	500000
benzo (a) pyrene	ND	ND	ND	ND	ND	ND	100000
indeno (1,2,3-cd) pyrene	ND	ND	ND	ND	ND	ND	500000
dibenzo (a,h) anthracene	ND	ND	ND	ND	ND	ND	500000
benzo (g,h,i) perylene	ND	ND	ND	ND	ND	ND	500000
dibenzofuran	ND	ND	ND	ND	ND	ND	-
2-methyl naphthalene	**97.2(TR)**	ND	ND	ND	ND	ND	-

(continued)

TABLE III (continued)
SUMMARY OF SOIL QUALITY DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SAMPLE DESIGNATION	MW4-S2	MW4-S5	MW5-S3	MW5-S4	MW6-S2	MW6-S4	NEW
SAMPLING DATE	30-Jun-93	30-Jun-93	29-Jun-93	29-Jun-93	29-Jun-93	29-Jun-93	JERSEY
SAMPLE DEPTH (feet)	2.0 - 4.0	8.0 - 10.0	6.0 - 8.0	8.0 - 10.0	2.0 - 4.0	6.0 - 8.0	SUBSURFACE
GROUNDWATER DEPTH (feet)	9.8	9.8	9.8	9.8	9.7	9.7	SOIL
SOIL TYPE	FILL	SAND	SILT/SAND	SILT/SAND	FILL	SILT/SAND	CRITERIA
METALS (mg/kg)							
arsenic	**10.5**	**1.2**	**5.2**	ND	ND	ND	*
beryllium	**0.82**	ND	**0.25**	ND	ND	ND	*
chromium	**14.3**	**18.2**	**18.4**	ND	ND	ND	*
copper	**36.3**	ND	ND	**5.5**	ND	ND	*
lead	ND	ND	ND	ND	ND	ND	*
nickel	**20.9**	ND	ND	ND	ND	ND	*
zinc	**26.4**	**18.2**	**126.0**	**70.6**	**7.6**	**8.9**	*
PESTICIDES (ug/kg)							
pp'-DDD	ND	**25.7**	ND	ND	ND	ND	100000
pp'-DDE	ND	ND	ND	ND	ND	ND	100000
pp'-DDT	ND	**36.9**	ND	ND	ND	ND	100000
PCBs (ug/kg)							
aroclor 1260	ND	ND	**21.8**	**3550**	ND	ND	100000

NOTES AND ABBREVIATIONS:
1. ND: compound not detected above analytical detection limit.
2. TR: compound identified at concentration less than the analytical detection limit (trace).
3. Groundwater depths measured in completed monitoring wells on 7, 8 July 1993.
4. This table includes only those compounds detected during the indicated sampling dates.
5. "-": soil standard not provided. "*": soil standard for inorganic contaminants is determined on a site specific basis.
6. "***": compound detected in method blank.

VWO:NWSEARLE:USNSOIL.WQ1

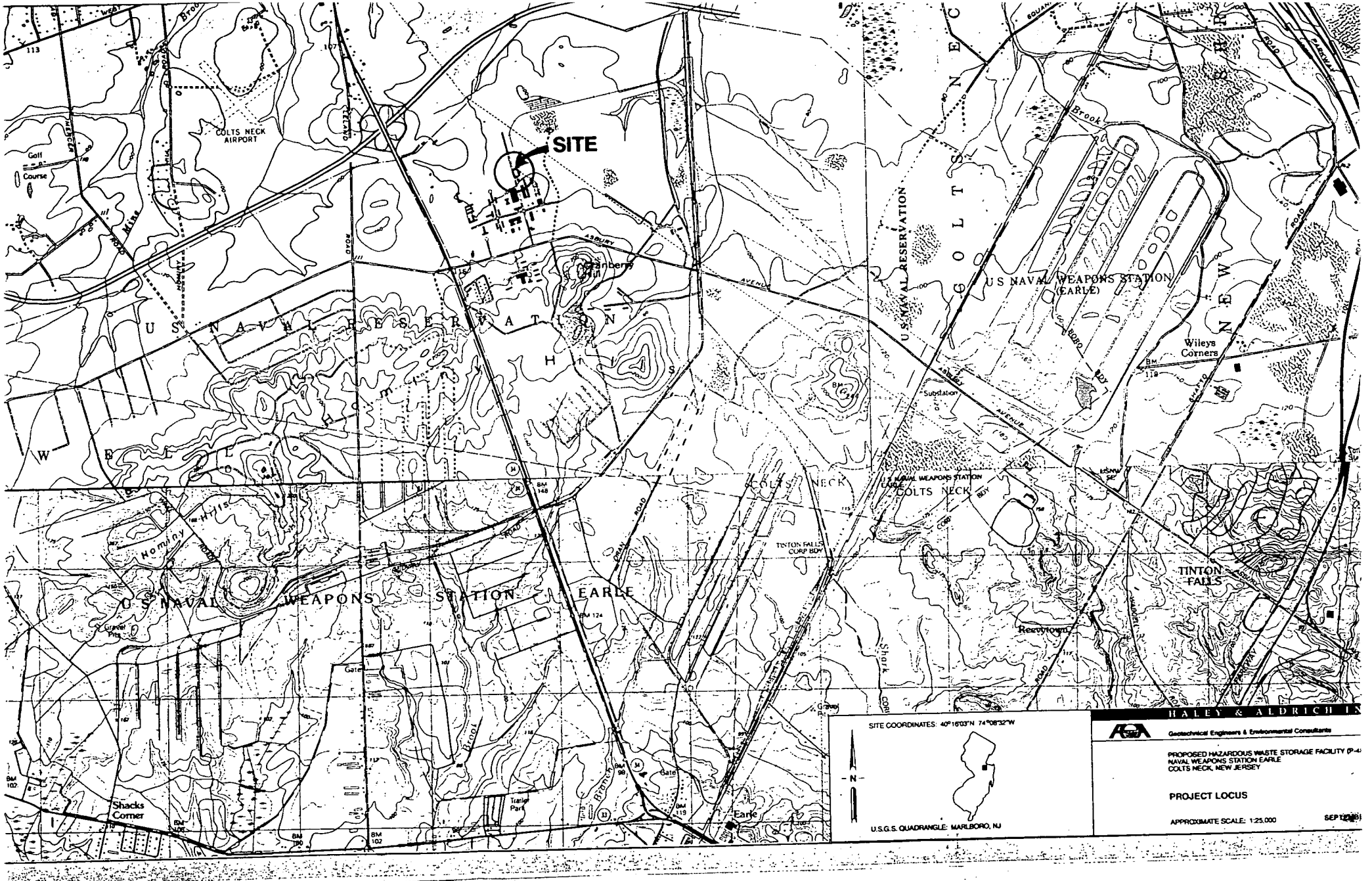
TABLE IV
SUMMARY OF GROUNDWATER QUALITY DATA
PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

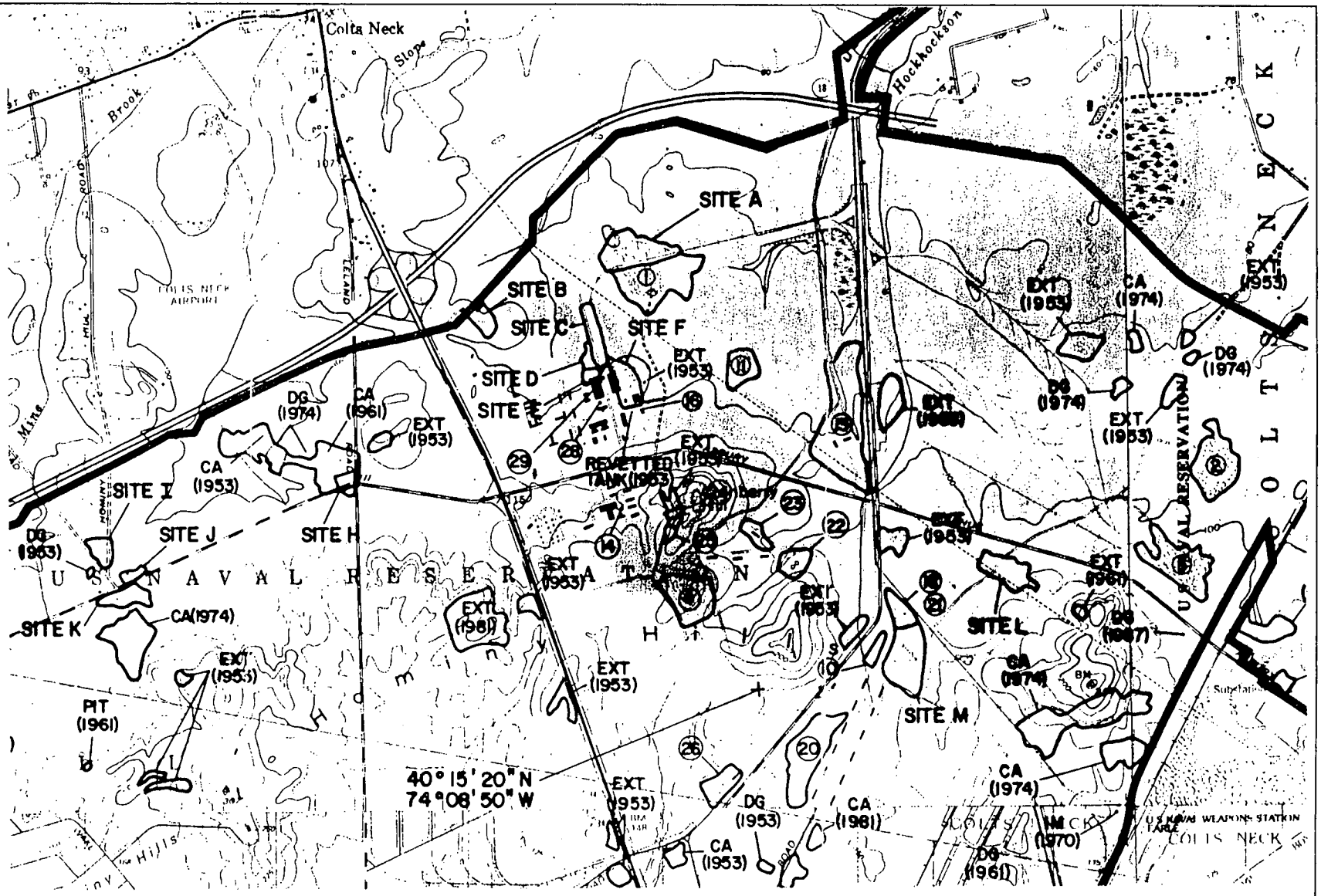
SAMPLE DESIGNATION SAMPLING DATE	MW-1 07-Jul-93	MW-2 07-Jul-93	MW-3 08-Jul-93	MW-4 08-Jul-93	MW-5 08-Jul-93	MW-6 08-Jul-93	NEW JERSEY GW CLEANUP STANDARDS FOR CLASS IIA GROUNDWATERS	U.S.E.P.A. MCL
VOLATILE ORGANIC COMPOUNDS (ug/l)								
vinyl chloride	ND	ND	ND	30	ND	ND	2	2
cis/trans-1,2-dichloroethene	ND	ND	3.7(TR)	25	ND	9.9	10/100*	70/100*
ACID & BASE/NEUTRAL EXTRACTABLE COMPOUNDS (ug/l)								
phenanthrene	ND	ND	2.76(TR)	ND	ND	ND	-	-
diethyl phthalate	ND	ND	ND	ND	4.46(TR)	2.12(TR)	5000	-
METALS (ug/l)								
chromium	323.0	94.4	229.0	152.0	196.0	197.0	100	100
copper	50.0	ND	ND	ND	ND	ND	-	1300**
lead	110.0	17.3	54.4	43.3	26.4	31.0	10	15***
mercury	ND	ND	ND	0.6	ND	ND	2	2
zinc	380.0	200.0	280.0	270.0	330.0	250.0	5000	-
PESTICIDES (ug/l)	ND	ND	ND	ND	ND	ND	ND	-
PCBs (ug/l)	ND	ND	ND	ND	ND	ND	ND	0.5

NOTES AND ABBREVIATIONS:

1. ND: compound not detected above quantitation limit.
2. TR: compound identified at concentration less than the analytical detection limit (trace).
3. This table includes only those compounds detected during the indicated sampling dates.
4. "-": groundwater standard not provided.
5. "***": EPA action level. "****": EPA action level at tap. EPA values published May 1993.
6. "*" represents values for cis -1,2-dichloroethene/trans -1,2-dichloroethene.

VWO:NWSEARLE:USNGW.WQ1


SITE
COLTS NECK AIRPORT
Golf Course
U S NAVAL RESERVATION
HOLMDEL HILLS
WELL
Cranberry Hill
ASBURY AVENUE
U.S. NAVAL RESERVATION
COLTS NECK
U S NAVAL WEAPONS STATION (EARLE)
Wileys Corners
Substation
U S NAVAL WEAPONS STATION EARLE
COLTS NECK
TINTON FALLS CORP BDY
TINTON FALLS
Hominy Hills
U S NAVAL WEAPONS STATION EARLE
Gravel Pits
Gate
Recovtown
Shark
Brook
Branch
Trailer Park
Shacks Corner
Earle
SITE COORDINATES: 40°16'03"N 74°08'32"W
N
U.S.G.S. QUADRANGLE: MARLBORO, NJ
HALEY & ALDRICH INC
Geotechnical Engineers & Environmental Consultants
PROPOSED HAZARDOUS WASTE STORAGE FACILITY (P-4)
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY
PROJECT LOCUS
APPROXIMATE SCALE: 1:25,000
SEPT 1988



KEY:

(2) AREA OF ENVIRONMENTAL CONCERN DEVELOPED DURING THE INSTALLATION RESTORATION PROGRAM

(A) AREA OF ENVIRONMENTAL CONCERN DEVELOPED DURING PHOTOGRAPHIC INTERPRETATION SURVEY

REFERENCE:

(ENVIRONMENTAL PHOTOGRAPHIC INTERPRETATION CENTER, WARRENTON, VA) USEPA CONTRACT #68-03-3532

HALEY & ALDRICH INC.

Geotechnical Engineers & Environmental Consultants

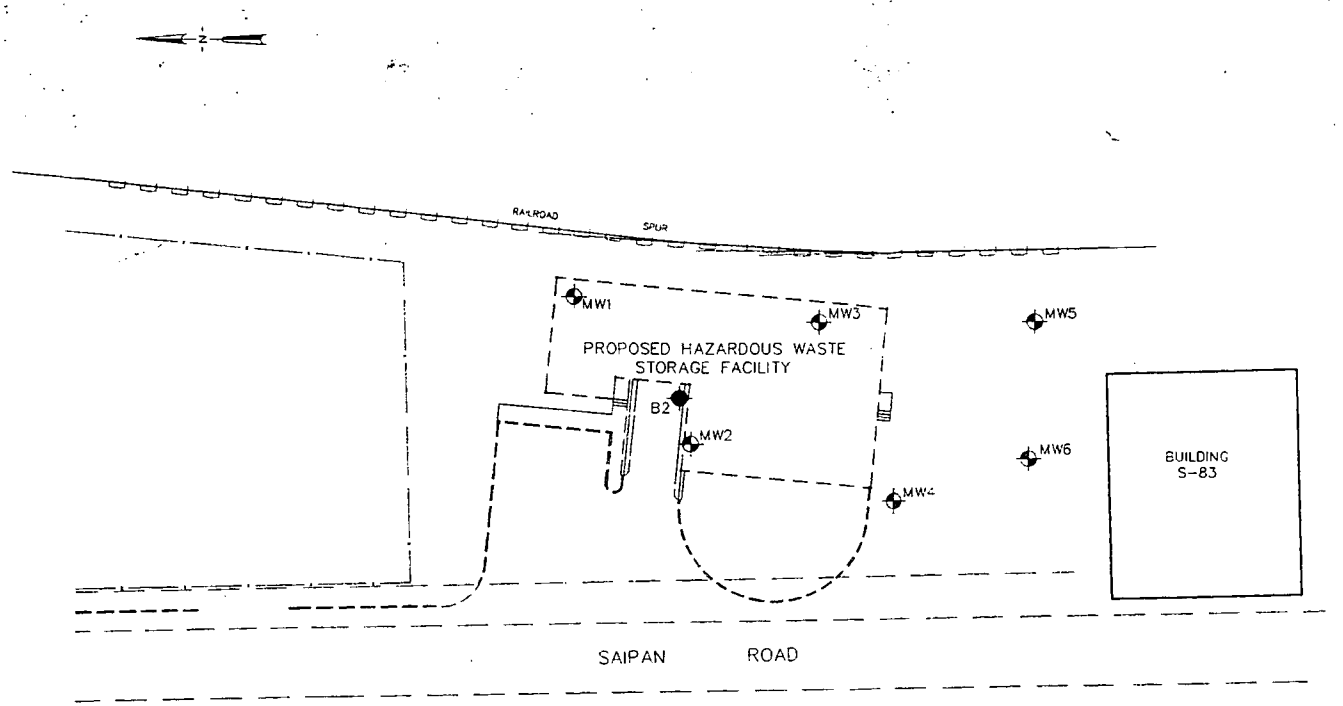
PROPOSED HAZARDOUS WASTE STORAGE FACILITY (P-482)
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

AREAS OF ENVIRONMENTAL CONCERN

SCALE: NONE

SEPTEMBER 1993

FIGURE 2



LEGEND:

B2 ◆ DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING CONDUCTED BY WARREN GEORGE, INC., ON 2 JULY 1993.

MW1 DESIGNATION AND APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL INSTALLED BY WARREN GEORGE, INC., DURING 29 JUNE TO 2 JULY 1993.

NOTES:

1. FIGURE PREPARED FROM DRAWING ENTITLED "HAZARDOUS WASTE STORAGE FACILITY, GRADING, DRAINAGE, AND LANDSCAPING PLAN," RECEIVED 2 JULY 1993 AND PREPARED BY ANDERSON-NICHOLS & CO., INC.
2. EXPLORATION LOCATIONS WERE APPROXIMATED BY HALEY & ALDRICH, INC. BY TAPING FROM EXISTING SITE FEATURES.
3. SURFACE ELEVATIONS AT EXPLORATION LOCATIONS WERE APPROXIMATED BY HALEY & ALDRICH, INC., FROM INFORMATION GIVEN ON THE DRAWING REFERENCED IN NOTE 1.
4. REFER TO THE TEXT AND THE APPENDICES OF THE PROJECT REPORT FOR DETAILS AND RESULTS OF THE SUBSURFACE EXPLORATION PROGRAM.
5. SUBSURFACE EXPLORATIONS WERE MONITORED IN THE FIELD BY HALEY & ALDRICH, INC., PERSONNEL.

0 40 80
SCALE IN FEET

HALEY & ALDRICH, INC.
Geotechnical Engineers & Environmental Consultants

PROPOSED HAZARDOUS WASTE STORAGE FACILITY
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY

SITE AND SUBSURFACE
EXPLORATION LOCATION PLAN

SCALE: AS SHOWN SEPTEMBER 1993

FIGURE

11135-40 B3 (ACAD: \11135B3)

APPENDIX A

NJDEPE Correspondence

DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
Ser 1819/1821/JPK
MAR 0 4 1993

U. S. Environmental Protection Agency
Attn: Paul Ingrisano
J. Javits Federal Building
New York, NY 10278

Re: NO FURTHER ACTION DECISION FOR SITE 29 AND SITE C
NAVAL WEAPONS STATION (NWS) EARLE, COLTS NECK, NJ

Dear Mr. Ingrisano:

This letter is in reference to the Site Investigation for Site 29 (PCB Spill Site) and the Preliminary Assessment for the contiguous Site C (Length of Duffy's Locker). As discussed at the TRC meeting on 9 February 1993, the Navy feels no further action is appropriate at these sites. This conclusion is based upon results of sampling conducted during the Site Investigation and a review of Public Works storage practices in the Preliminary Assessment Addendum.

As you are aware, the Navy plans to construct a permitted hazardous waste storage facility on this site. Deficiencies of our currently permitted facility have prompted the Navy to move the new facility into the FY94 Military Construction Program.

Five soil borings are planned as part of the design effort. The Navy intends to take samples from each of these borings for TCLP analysis to establish a baseline for the RCRA facility.

If you have any comments or concerns regarding this NFA decision, please advise us within 30 days. Otherwise we will conclude acceptance of this decision and will continue with the HWSF as scheduled. If you have any questions or comments concerning this matter, please contact Mr. John Kolicius at (215) 595-0567.

Sincerely,

T. G. SHECKELS
Head, Restoration Management Section
By direction of the Commanding Officer

Copy to:
NJDEPE, Joseph Freudenberg
NWS Earle, Gus Hermanni

APPENDIX B

NJDEPE Major Modification Requirements

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
BUREAU OF HAZARDOUS WASTE ENGINEERING

Hazardous Waste Facility Permit Modification
Checklist For Administrative Completeness

Prepared and Provided Pursuant to N.J.S.A. 13:1D-101 and 102

Listed below are the submission requirements for an administratively complete application package for a modification to a Hazardous Waste Facility permit

- ☐ 1. NJDEPE Consolidated Permit Application Form CP#1
- ☐ 2. USEPA Part A Permit Application
- ☐ 3. Environmental and Health Impact Statement Per N.J.A.C. 7:26-12.2(j)
- ☐ 4. Description of Requested Permit Changes and Reasons Changes are Necessary
- ☐ 5. General Facility Description Per N.J.A.C. 7:26-12.2(f)1
- ☐ 6. Topographic Map Per N.J.A.C. 7:26-12.2(f)13
- ☐ 7. Property Ownership Data Per N.J.A.C. 7:26-12.2(f)12
- ☐ 8. Flood Hazard Information Per N.J.A.C. 7:26-12.2(f)15
- ☐ 9. Traffic Information Per N.J.A.C. 7:26-12.2(f)22
- ☐ 10. Waste Characterization Per N.J.A.C. 7:26-12.2(f)2
- ☐ 11. Waste Analysis Plan Per N.J.A.C. 7:26-9.4(b)2
- ☐ 12. Engineering Design Data Per N.J.A.C. 7:26-12.2(f)9
- ☐ 13. Process Descriptions Per N.J.A.C. 7:26-12.2(f)3
- ☐ 14. Specific Hazardous Waste Management Unit Information Per N.J.A.C. 7:26-12.2(g)
- ☐ 15. Site Security Information Per N.J.A.C. 7:26-12.2(f)5
- ☐ 16. Facility Inspection Plan Per N.J.A.C. 7:26-9.4(f)
- ☐ 17. Preparedness and Prevention Information Per N.J.A.C. 7:26-9.6

- ☐ 18. Specific Hazards Prevention Information Per N.J.A.C. 7:26-12.2(f)10
- ☐ 19. Information Regarding Management of Ignitable, Reactive or Incompatible Wastes Per N.J.A.C. 7:26-12.2(f)11
- ☐ 20. Contingency Plan Per N.J.A.C. 7:26-9.7(a)-(k)
- ☐ 21. Emergency Procedures Information Per N.J.A.C. 7:26-9.7(l)
- ☐ 22. Personnel Training Information Per N.J.A.C. 7:26-12.2(f)23
- ☐ 23. Facility Closure Plan Per N.J.A.C. 7:26-9.8
- ☐ 24. Closure Cost Estimate Per N.J.A.C. 7:26-9.10(e)
- ☐ 25. Closure Financial Assurance Information Per N.J.A.C. 7:26-9.10(f)
- ☐ 26. Facility Post-Closure Plan Per N.J.A.C. 7:26-9.9
- ☐ 27. Post-Closure Cost Estimate Per N.J.A.C. 7:26-9.11(c)
- ☐ 28. Post-Closure Financial Assurance Information Per N.J.A.C. 7:26-9.11(d)
- ☐ 29. Notice In Deed Per N.J.A.C. 7:26-12.2(f)17
- ☐ 30. Facility Liability Insurance Per N.J.A.C. 7:26-12.2(f)20
- ☐ 31. Two-Part Certification Statement and Signatures Per N.J.A.C. 7:26-12.2(k)
- ☐ 32. Permit Modification Fee Per N.J.A.C. 7:26-4A.3

APPENDIX C

Test Boring Logs

JOB LOCATION:
EARLE NAVAL BASE

L.93236

WGI Warren George Inc.
SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 1 OF 1
LOCATION COLTS NECK, NJ
HOLE NO. MW-1
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE START: 7-1-93
DATE FINISH: 7-1-93

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 4-1/4" I.D. AUGER
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	
		1	1'-3'	15'	11	17	13	15	MED.		DARK BROWN SILTY FINE SAND, LITTLE COARSE MEDIUM SAND, CINDERS, TRACE CONCRETE, GLASS
		2	4'-6'	11"	17	10	17	15	MED.		
		3	6'-8'	19"	"5	22	19	20	DENSE	8'	MISCELLANEOUS FILL
		4	8'-10'	18"	15	50	76	80	VERY DENSE	8'6"	BROWN SILTY FINE SAND, LITTLE CLAY
10		5	10'-12'	15"	5	70	39	47	VERY DENSE		YELLOW BROWN FINE SAND, TRACE TO LITTLE MEDIUM SAND
		6	15'-17'	17"	7	11	13	15	MED.		DO.
20		10	20'-22'	21"	8	9	11	14	MED.		DO.
		11	25'-27'	16"	8	13	19	22	DENSE	27'	YELLOW BROWN FINE SAND, TRACE MEDIUM SAND
30											INSTALLED WELL TO 15.7'
											END OF HOLE 27'
40											

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

JOB LOCATION:
EARLE NAVAL BASE

L.93236

WGI Warren George Inc.
SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 1 OF 2
LOCATION COLTS NECK, NJ
HOLE NO. B-2
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE START: 7-2-93
DATE FINISH: 7-2-93

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 4"AUGER I.D.
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0											
											NOTE: " 0'-17' " NO SAMPLES REQUIRED PER REQUEST OF ENGINEER
10											
20											
		1	20'-22'	12"	6	11	12	13	MED.		BROWN FINE SAND, TRACE MEDIUM SAND
		2	25'-27'	10"	9	13	15	19	MED.		DO.
30											
		3	30'-32'	14"	8	12	16	17	MED.		DO.
		4	35'-37'	20"	8	12	13	15			DO.
40											

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

JOB LOCATION:
EARLE NAVAL BASE

L.93236

WGI Warren George Inc.
SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 2 OF 2
LOCATION COLTS NECK, NJ
HOLE NO. B-2
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-2-93
DATE, FINISH: 7-2-93

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 4" AUGER I.D.
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0											
40		5	40'-42'	16"	15	20	37	47	VERY DENSE	42'	BROWN FINE SAND, TRACE MEDIUM SAND
											END OF HOLE 42'
50											
10											
60											
20											
70											
30											
80											
40											

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

JOB LOCATION:
EARLE NAVAL BASE

L.93236

WGI Warren George Inc.
SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 1 OF 1
LOCATION COLTS NECK, NJ
HOLE NO. MW-2
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-2-93
DATE, FINISH: 7-2-93

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 4" AUGER I.D.
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0									0'-	DARK BROWN SILTY FINE SAND, LITTLE BRICK FRAGMENTS
	1	1'-3'	13"	10	13	21	33	DENSE		
	2	4'-4'9"	2"	24	100	/3"		VERY DENSE	5'5"	MISCELLANEOUS FILL
	3	5'-7'	13"	10	5	9	5	MED.	7'	GRAY BROWN SILTY FINE SAND TRACE ORGANIC
	4	7'-9'	21"	6	6	8	10	MED.	9'	GRAY BROWN SILT, TRACE SAND
10	5	9'-11'	10"	17	19	21	23	DENSE		
	6	15'-17'	15"	4	7	9	9	MED.	17'	BROWN FINE SAND TRACE MEDIUM SAND
20										END OF HOLE 17'
										INSTALLED WELL TO 15'
30										
40										

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

JOB LOCATION:

EARLE NAVAL BASE

L.93236

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 1 OF 1
LOCATION COLTS NECK, NJ
HOLE NO. MW-3
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 6-30-93
DATE, FINISH: 7-1-93

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 4" AUGER I.D.
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0									0'-	BROWN-GRAY-BLACK MEDIUM FINE SAND, LITTLE SILT, GRAVEL, TRACE CONCRETE, LOAM
	1	0'-2'	16"	4	11	14	17	MED.		
	2	2'-4'	10"	16	16	11	13	MED.		
	3	4'-6'	13"	38	23	11	12	DENSE	6'	MISCELLANEOUS FILL
									7'	BLACK ORGANIC SILT
	4	6'-8'	17"	5	4	11	12	MED.	8'	GRAY SILTY FINE SAND, TRACE ROOTS
10	5	8'-10'	20"	7	11	15	21	MED.		GRAY BROWN FINE SAND, LITTLE MEDIUM SAND
	6	15'-17'	14"	5	9	10	12	MED.		YELLOW BROWN FINE SAND
20										
	7	20'-22'	10"	7	10	15	17	MED.		DO.
	8	25'-27'	13"	6	9	15	18	MED.	27'	YELLOW BROWN FINE SAND, TRACE MEDIUM SAND
30										INSTALLED WELL
										END OF HOLE 27'
40										

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

JOB LOCATION:

EARLE NAVAL BASE

L.93236

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 1 OF 1
LOCATION COLTS NECK, NJ
HOLE NO. MW-4
LINE & STA.
OFFSET

DEPTH ____ FT ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 6-30-93
DATE, FINISH: 6-30-93

GROUND ELEVATION
GROUND WATER ELEVATION 9.65'

CASING O.D. 4" AUGER I.D.
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	BROWN-BLACK COARSE FINE SAND, LITTLE GRAVEL, CINDERS
		1	0'-2'	15"	13	12	11	10	MED. VERY DENSE		
		2	2'-4'	10"	25	28	37	35		5'	MISCELLANEOUS FILL
		3	4'-6'	19"	9	11	5	4	MED.	7'	BLACK ORGANIC SILT FINE TO MEDIUM SAND
		4	6'-8'	20"	5	7	9	11	MED.	8'	YELLOW BROWN SILTY CLAY
10		5	8'-10'	11"	6	9	11	15	MED.		GRAY-BROWN COARSE FINE SAND, TRACE FINE GRAVEL
		6	15'-17'	19"	5	7	9	12	MED.		YELLOW BROWN FINE SAND, TRACE SILT
20		7	20'-22'	20"	5	7	13	19	MED.		DO.
		8	25'-27'	22"	7	15	16	20	DENSE	27'	FINE SAND
30											END OF HOLE 27' INSTALLED WELL TO 17.5'
40											

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

JOB LOCATION:

EARLE NAVAL BASE

L.93236

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET ___ OF ___
LOCATION COLTS NECK, NJ
HOLE NO. MW-5
LINE & STA. ___
OFFSET ___

DEPTH ___ FT. ___ FT. CASING OUT DATE: ___
DEPTH ___ FT. ALL CASING OUT DATE: ___

DATE, START: 6-29-93
DATE, FINISH: 6-29-93

GROUND ELEVATION ___
GROUND WATER ELEVATION 9.6'

CASING O.D. 4" AUGER I.D. ___
SAMPLER O.D. 2" I.D. ___
DIAMOND BIT SIZE ___

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ___ SAMPLER 30"

CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0									0'-	
	1	0'-2'	12"	7	9	12	10	MED.		BROWN MEDIUM FINE SAND, LITTLE SILT, GRAVEL, LOAM
	2	2'-4'	16"	8	7	6	11	MED.		
	NR	4'-6'		24	9	10	2	MED.	6.5'	MISCELLANEOUS FILL
	3	6'-8'	10"	9	4	3	5	LOOSE	9'	BROWN SILT, TRACE CLAY AND ORGANIC
10	4	8'-10'	7"	9	5	18	15	MED.		BROWN-GRAY GRAVELLY COARSE FINE SAND
	5	15'-17'	24"	3	4	5	10	LOOSE	17'	YELLOW BROWN FINE SAND
20										INSTALLED WELL TO 14.5'
										END OF HOLE 17'
30										
40										

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector: ___
Helper: ___

JOB LOCATION:

EARLE NAVAL BASE

L.93236

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: HALEY & ALDRICH

SHEET 1 OF 1
LOCATION COLTS NECK, NJ
HOLE NO. MW-6
LINE & STA.
OFFSET

DEPTH ____ FT ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 6-30-93
DATE, FINISH: 6-30-93

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 4" AUGER I.D
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER 24 IN.

HAMMER FALL
CASING ____ SAMPLER 30"

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	18-24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0									VERY	0'-	BROWN SILTY FINE
		1	0'-2'	15"	17	31	23	17	DENSE		SAND, LITTLE FINE
									VERY		GRAVEL, TRACE
		2	2'-4'	16"	17	16	37	27	DENSE		COARSE MEDIUM SAND
		3	4'-6'	12"	7	24	23	7	DENSE	6.5'	MISCELLANEOUS FILL
										7'	BROWN ORGANIC SILT
		4	6'-8'	24"	5	4	5	10	LOOSE		
										9'	BROWN CLAYEY SILT
10											BROWN GRAVELLY COARSE FINE SAND
		5	10'-12'	13"	7	15	25	26	DENSE		
											YELLOW BROWN FINE SAND, TRACE
		6	15'-17'	19"	5	5	8	7	MED	17'	GRAVEL
20											INSTALLED WELL TO 14'
											END OF HOLE 17'
30											
40											

Soil Engineer: C. OSGOOD
Driller: JOE KURZYNOWSKI
Drilling Inspector:
Helper:

APPENDIX D

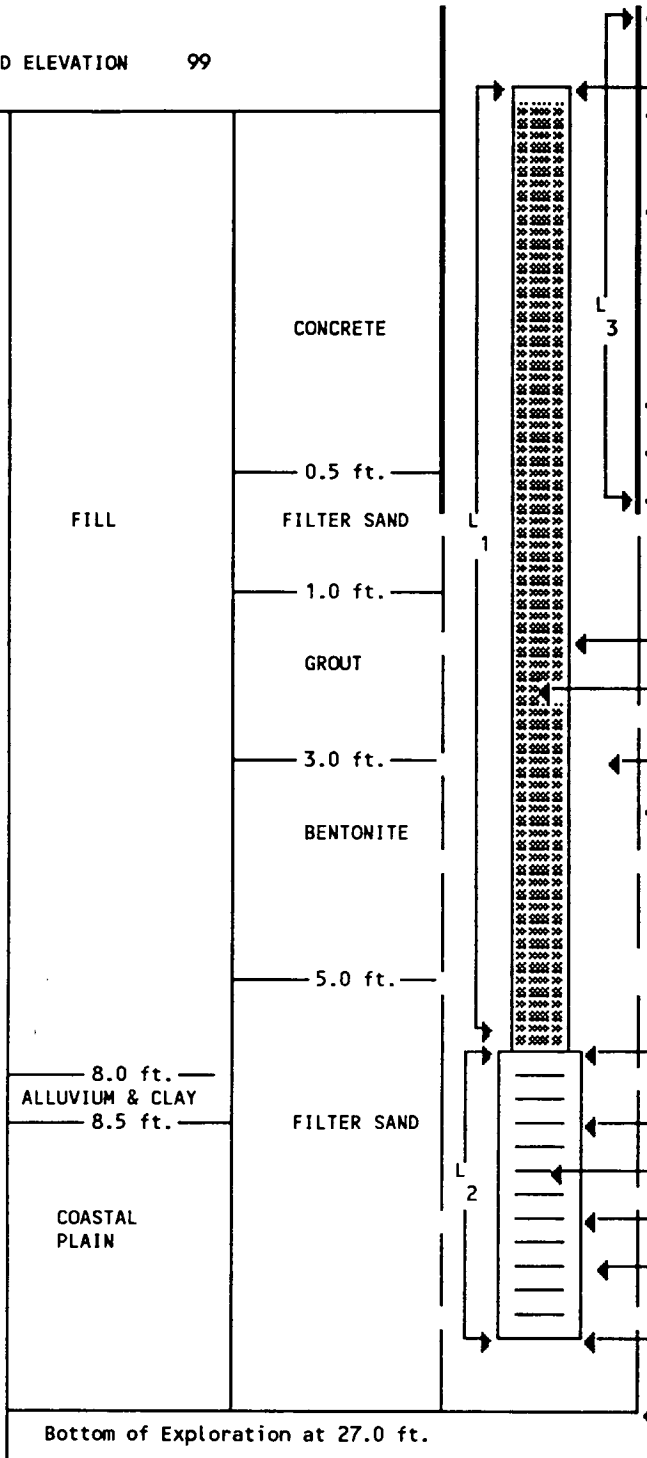
Groundwater Monitoring Well Installation Reports; Well Permits

HALEY & ALDRICH, INC. Geotechnical Engineers & Environmental Consultants	**GROUNDWATER MONITORING WELL INSTALLATION REPORT**	WELL NO. MW-1 FILE NO. 11135-40

PROJECT: HAZARDOUS WASTE STORAGE FACILITY LOCATION: NWS EARLE, COLT'S NECK, NEW JERSEY CLIENT: ANDERSON-NICHOLS & COMPANY, INC. CONTRACTOR: WARREN GEORGE, INC. DRILLER: JOE KURZINOWSKI	BORING NO: MW-1 LOCATION: See Plan INSTALLATION DATE: 1 July 93 H&A REP.: C.S. Osgood

SURVEY DATUM TORW

GROUND ELEVATION 99



ELEVATION ABOVE GROUND SURFACE OF CASING OR ROADWAY BOX	0.0 ft.
ELEVATION BELOW GROUND SURFACE OF RISER PIPE	0.1 ft.
THICKNESS OF SURFACE SEAL	5.0 ft.
TYPE OF SURFACE SEAL	Grout, Concrete & Bentonite
[INDICATE ALL SEALS SHOWING DEPTH, THICKNESS AND TYPE]	
TYPE OF PROTECTIVE CASING	Flush mount
INSIDE DIAMETER OF CASING	0.5 ft.
DEPTH OF BOTTOM OF CASING	0.83 ft.
TYPE OF RISER PIPE	PVC
INSIDE DIAMETER OF RISER PIPE	2.0 in.
TYPE OF BACKFILL AROUND RISER	Filter sand & surface seal
DIAMETER OF BOREHOLE	8.0 in.
DEPTH OF BOTTOM OF RISER	5.7 ft.
TYPE OF POINT OR MANUFACTURER	Sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS	0.010 in.
DIAMETER OF WELLPOINT	2.75 in.
TYPE OF BACKFILL AROUND POINT	Filter sand
DEPTH OF BOTTOM OF POINT	15.7 ft.
DEPTH OF BOTTOM OF BOREHOLE	27.0 ft.

Bottom of Exploration at 27.0 ft.

[FIGURES REFER TO: ( )ELEVATION (X)DEPTH]

1.0 ft. LENGTH OF CASING (L_3)	5.6 ft. LENGTH OF RISER PIPE (L_1)	+	10.0 ft. LENGTH OF POINT (L_2)	= 15.6 ft. PAY LENGTH

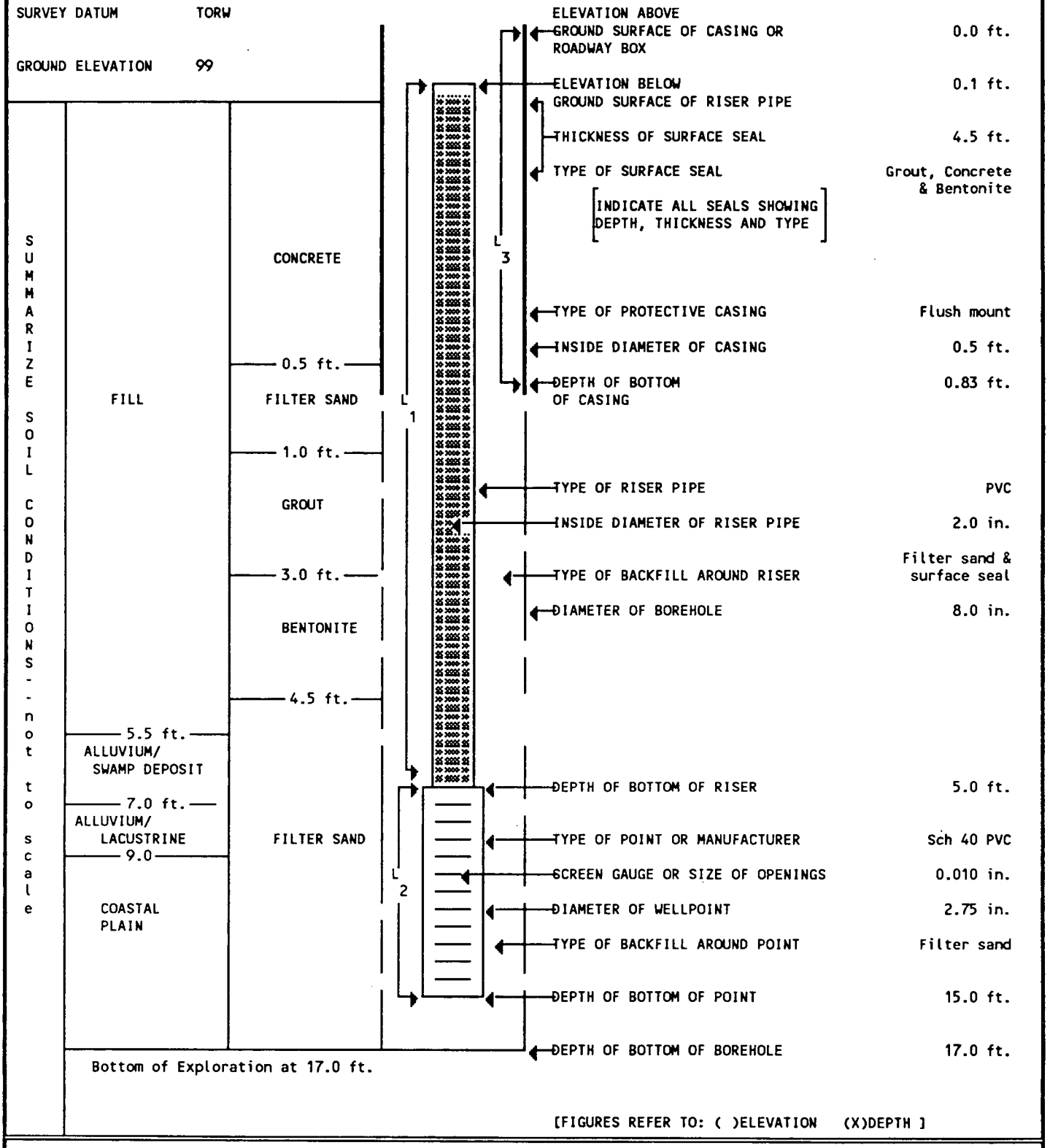
FORM 59 REV JAN 91

HALEY & ALDRICH, INC. Geotechnical Engineers & Environmental Consultants	GROUNDWATER MONITORING WELL INSTALLATION REPORT	WELL NO. MW-2 FILE NO. 11135-40

PROJECT: HAZARDOUS WASTE STORAGE FACILITY LOCATION: NWS EARLE, COLT'S NECK, NEW JERSEY CLIENT: ANDERSON-NICHOLS & COMPANY, INC. CONTRACTOR: WARREN GEORGE, INC. DRILLER: JOE KURZINOWSKI	BORING NO: MW-2 LOCATION: See Plan INSTALLATION DATE: 1 July 93 H&A REP.: C.S. Osgood

SURVEY DATUM TORW

GROUND ELEVATION 99



[FIGURES REFER TO: ( )ELEVATION (X)DEPTH]

1.0 ft. LENGTH OF CASING (L_3)	4.9 ft. LENGTH OF RISER PIPE (L_1)	+	10.0 ft. LENGTH OF POINT (L_2)	= 14.9 ft. PAY LENGTH

FORM 59 REV JAN 91

HALEY & ALDRICH, INC.
CAMBRIDGE, MASSACHUSETTS

GROUND WATER MONITORING REPORT

OW/PZ NUMBER: MW-2

ELEVATION SUBTRAHEND 99

FILE NO. 11135-40/41
PAGE NO. 1

DATE	TIME	ELAPSED TIME	DEPTH OF WATER FROM Ground surface	ELEVATION OF WATER	REMARKS	READ BY
2-Jul-93	1000	18.5 hrs.	10.60	88.4		CO
7-Jul-93	1617	6 days	10.59	88.4		CO

H&A FORM JAN. 79 59A

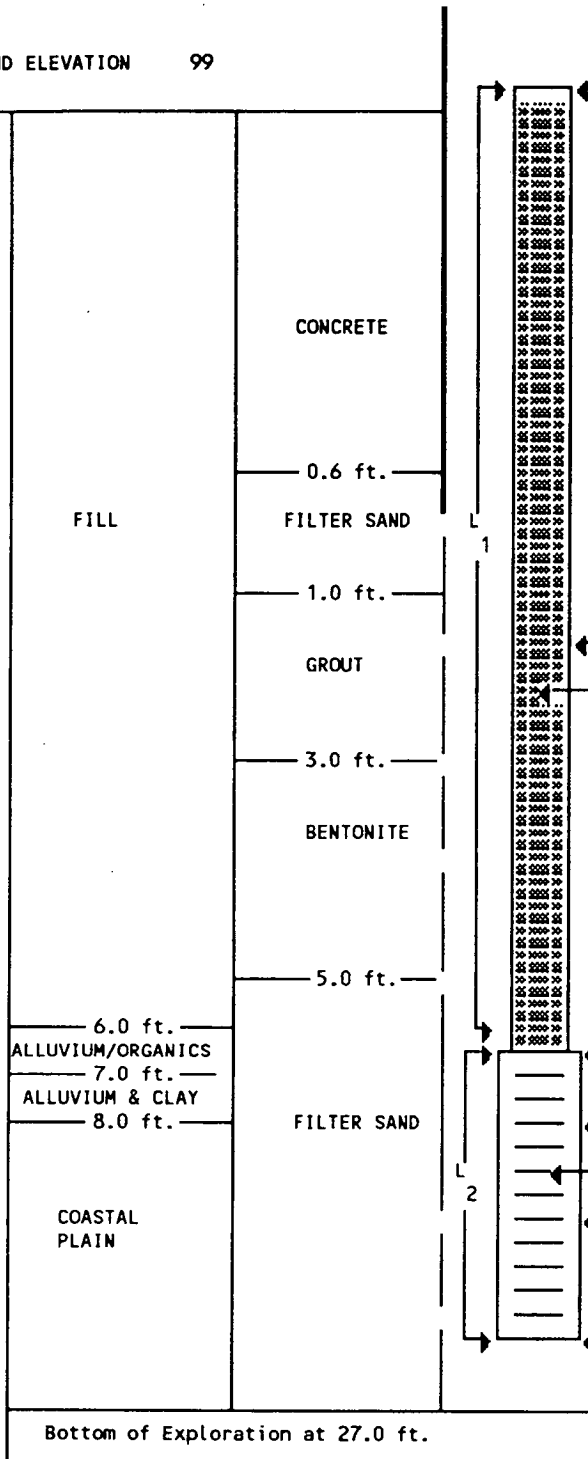
HALEY & ALDRICH, INC. Geotechnical Engineers & Environmental Consultants	GROUNDWATER MONITORING WELL INSTALLATION REPORT	WELL NO. MW-3 FILE NO. 11135-40

PROJECT: HAZARDOUS WASTE STORAGE FACILITY
LOCATION: NWS EARLE, COLT'S NECK, NEW JERSEY
CLIENT: ANDERSON-NICHOLS & COMPANY, INC.
CONTRACTOR: WARREN GEORGE, INC.
DRILLER: JOE KURZINOWSKI

BORING NO: MW-3
LOCATION: See Plan
INSTALLATION DATE: 30 Jun 93
H&A REP.: C.S. Osgood

SURVEY DATUM TORW

GROUND ELEVATION 99



ELEVATION ABOVE GROUND SURFACE OF CASING OR ROADWAY BOX	0.0 ft.
ELEVATION BELOW GROUND SURFACE OF RISER PIPE	0.1 ft.
THICKNESS OF SURFACE SEAL	5.0 ft.
TYPE OF SURFACE SEAL	Grout, Concrete & Bentonite
[INDICATE ALL SEALS SHOWING DEPTH, THICKNESS AND TYPE]	
TYPE OF PROTECTIVE CASING	Flush mount
INSIDE DIAMETER OF CASING	0.5 ft.
DEPTH OF BOTTOM OF CASING	0.83 ft.
TYPE OF RISER PIPE	PVC
INSIDE DIAMETER OF RISER PIPE	2.0 in.
TYPE OF BACKFILL AROUND RISER	Filter sand & surface seal
DIAMETER OF BOREHOLE	8.0 in.
DEPTH OF BOTTOM OF RISER	6.0 ft.
TYPE OF POINT OR MANUFACTURER	Sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS	0.010 in.
DIAMETER OF WELLPOINT	2.75 in.
TYPE OF BACKFILL AROUND POINT	Filter sand
DEPTH OF BOTTOM OF POINT	16.0 ft.
DEPTH OF BOTTOM OF BOREHOLE	27.0 ft.

[FIGURES REFER TO: ( )ELEVATION (X)DEPTH]

1.0 ft. LENGTH OF CASING (L_3)	5.9 ft. LENGTH OF RISER PIPE (L_1)	+	10.0 ft. LENGTH OF POINT (L_2)	= 15.9 ft. PAY LENGTH

FORM 59 REV JAN 91

HALEY & ALDRICH, INC.
CAMBRIDGE, MASSACHUSETTS

GROUND WATER MONITORING REPORT

OW/PZ NUMBER: MW-3

ELEVATION SUBTRAHEND 99

FILE NO. 11135-40/41

PAGE NO. 1

DATE	TIME	ELAPSED TIME	DEPTH OF WATER FROM Ground surface	ELEVATION OF WATER	REMARKS	READ BY
1-Jul-93	0930	18 hrs.	10.35	88.7		CO
8-Jul-93	0900	8 days	10.39	88.6		CO

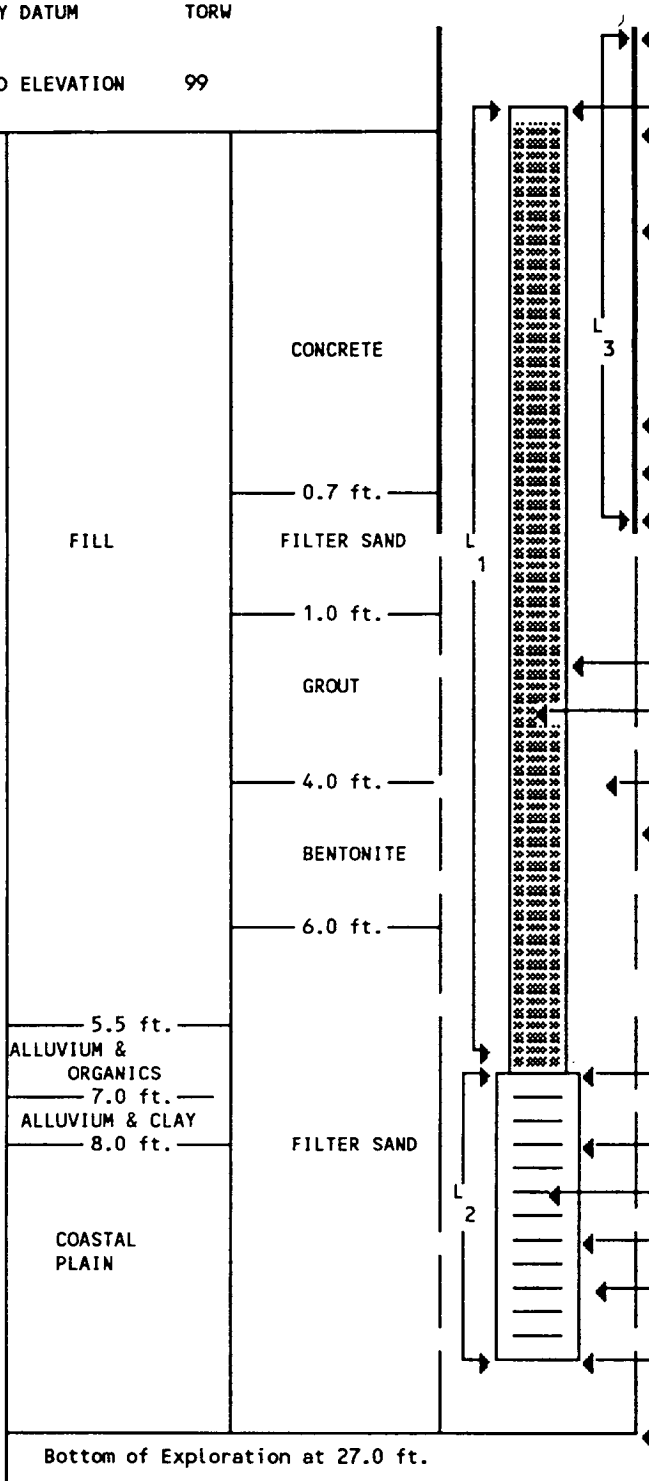
H&A FORM JAN. 70 59A

HALEY & ALDRICH, INC. Geotechnical Engineers & Environmental Consultants	GROUNDWATER MONITORING WELL INSTALLATION REPORT	WELL NO. MW-4 FILE NO. 11135-40

PROJECT: HAZARDOUS WASTE STORAGE FACILITY LOCATION: NWS EARLE, COLT'S NECK, NEW JERSEY CLIENT: ANDERSON-NICHOLS & COMPANY, INC. CONTRACTOR: WARREN GEORGE, INC. DRILLER: JOE KURZINOWSKI	BORING NO: MW-4 LOCATION: See Plan INSTALLATION DATE: 30 Jun 93 H&A REP.: C.S. Osgood

SURVEY DATUM TORW

GROUND ELEVATION 99



Bottom of Exploration at 27.0 ft.

ELEVATION ABOVE GROUND SURFACE OF CASING OR ROADWAY BOX	0.0 ft.
ELEVATION BELOW GROUND SURFACE OF RISER PIPE	0.1 ft.
THICKNESS OF SURFACE SEAL	6.0 ft.
TYPE OF SURFACE SEAL	Grout, Concrete & Bentonite
[INDICATE ALL SEALS SHOWING DEPTH, THICKNESS AND TYPE]	
TYPE OF PROTECTIVE CASING	Flush mount
INSIDE DIAMETER OF CASING	0.5 ft.
DEPTH OF BOTTOM OF CASING	0.83 ft.
TYPE OF RISER PIPE	PVC
INSIDE DIAMETER OF RISER PIPE	2.0 in.
TYPE OF BACKFILL AROUND RISER	Filter sand & surface seal
DIAMETER OF BOREHOLE	8.0 in.
DEPTH OF BOTTOM OF RISER	7.5 ft.
TYPE OF POINT OR MANUFACTURER	Sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS	0.010 in.
DIAMETER OF WELLPOINT	2.75 in.
TYPE OF BACKFILL AROUND POINT	Filter sand
DEPTH OF BOTTOM OF POINT	17.5 ft.
DEPTH OF BOTTOM OF BOREHOLE	27.0 ft.

[FIGURES REFER TO: ( )ELEVATION (X)DEPTH]

1.0 ft. LENGTH OF CASING (L_3)	7.4 ft. LENGTH OF RISER PIPE (L_1)	+	10.0 ft. LENGTH OF POINT (L_2)	= 17.4 ft. PAY LENGTH

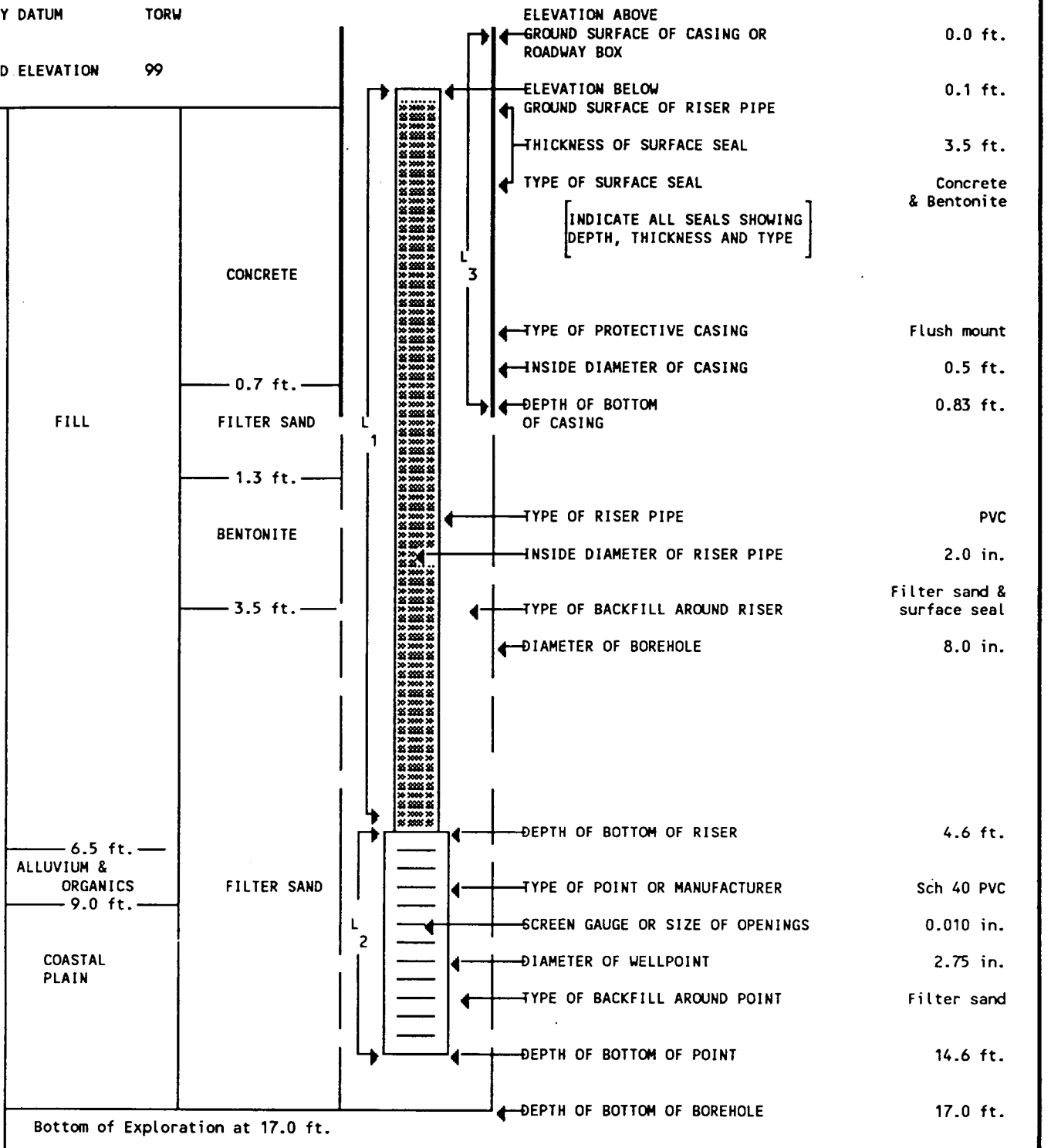
FORM 59 REV JAN 91

HALEY & ALDRICH, INC. Geotechnical Engineers & Environmental Consultants	GROUNDWATER MONITORING WELL INSTALLATION REPORT	WELL NO. MW-5 FILE NO. 11135-40

PROJECT: HAZARDOUS WASTE STORAGE FACILITY LOCATION: NWS EARLE, COLT'S NECK, NEW JERSEY CLIENT: ANDERSON-NICHOLS & COMPANY, INC. CONTRACTOR: WARREN GEORGE, INC. DRILLER: JOE KURZINOWSKI	BORING NO: MW-5 LOCATION: See Plan INSTALLATION DATE: 29 Jun 93 H&A REP.: C.S. Osgood

SURVEY DATUM TORW

GROUND ELEVATION 99



1.0 ft. LENGTH OF CASING (L_3)	4.5 ft. LENGTH OF RISER PIPE (L_1)	+	10.0 ft. LENGTH OF POINT (L_2)	= 14.5 ft. PAY LENGTH

FORM 59 REV JAN 91

HALEY & ALDRICH, INC.
CAMBRIDGE, MASSACHUSETTS

GROUND WATER MONITORING REPORT

OW/PZ NUMBER: MW-5

ELEVATION SUBTRAHEND 99

FILE NO. 11135-40/41

PAGE NO. 1

DATE	TIME	ELAPSED TIME	DEPTH OF WATER FROM Ground surface	ELEVATION OF WATER	REMARKS	READ BY
30-Jun-93	1045	19.25 hrs.	9.60	89.4		CO
8-Jul-93	1125	9 days	9.80	89.2		CO

H & A FORM JAN. 79 59A

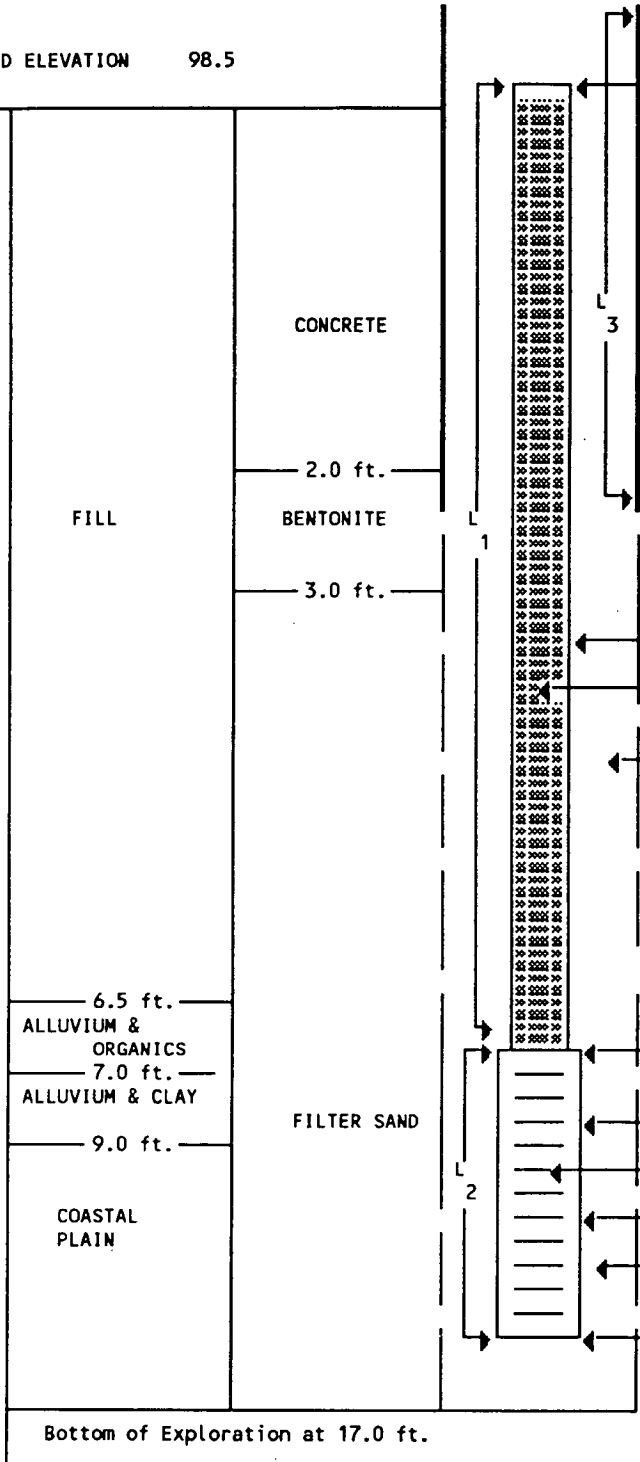
HALEY & ALDRICH, INC. Geotechnical Engineers & Environmental Consultants	GROUNDWATER MONITORING WELL INSTALLATION REPORT	WELL NO. MW-6 FILE NO. 11135-40

PROJECT: HAZARDOUS WASTE STORAGE FACILITY LOCATION: NWS EARLE, COLT'S NECK, NEW JERSEY CLIENT: ANDERSON-NICHOLS & COMPANY, INC. CONTRACTOR: WARREN GEORGE, INC. DRILLER: JOE KURZINOWSKI	BORING NO: MW-6 LOCATION: See Plan INSTALLATION DATE: 29 Jun 93 H&A REP.: C.S. Osgood

SURVEY DATUM TORW

GROUND ELEVATION 98.5

SUMMARIZE SOIL CONDITIONS - not to scale



ELEVATION ABOVE GROUND SURFACE OF CASING OR ROADWAY BOX	0.0 ft.
ELEVATION BELOW GROUND SURFACE OF RISER PIPE	0.1 ft.
THICKNESS OF SURFACE SEAL	3.0 ft.
TYPE OF SURFACE SEAL	Concrete & Bentonite
[INDICATE ALL SEALS SHOWING DEPTH, THICKNESS AND TYPE]	
TYPE OF PROTECTIVE CASING	Flush mount
INSIDE DIAMETER OF CASING	0.5 ft.
DEPTH OF BOTTOM OF CASING	0.83 ft.
TYPE OF RISER PIPE	PVC
INSIDE DIAMETER OF RISER PIPE	2.0 in.
TYPE OF BACKFILL AROUND RISER	Filter sand & surface seal
DIAMETER OF BOREHOLE	8.0 in.
DEPTH OF BOTTOM OF RISER	3.8 ft.
TYPE OF POINT OR MANUFACTURER	Sch 40 PVC
SCREEN GAUGE OR SIZE OF OPENINGS	0.010 in.
DIAMETER OF WELLPOINT	2.75 in.
TYPE OF BACKFILL AROUND POINT	Filter sand
DEPTH OF BOTTOM OF POINT	13.8 ft.
DEPTH OF BOTTOM OF BOREHOLE	17.0 ft.

Bottom of Exploration at 17.0 ft.

[FIGURES REFER TO: ( )ELEVATION (X)DEPTH]

1.0 ft. LENGTH OF CASING (L_3)	3.7 ft. LENGTH OF RISER PIPE (L_1)	+	10.0 ft. LENGTH OF POINT (L_2)	= 13.7 ft. PAY LENGTH

FORM 59 REV JAN 91

HALEY & ALDRICH, INC.
CAMBRIDGE, MASSACHUSETTS

GROUND WATER MONITORING REPORT

OW/PZ NUMBER: MW-6

ELEVATION SUBTRAHEND 98.5

FILE NO. 1135-40/41

PAGE NO. 1

DATE	TIME	ELAPSED TIME	DEPTH OF WATER FROM Ground surface	ELEVATION OF WATER	REMARKS	READ BY
29-Jun-93	1215	0.5 hrs.	9.60	88.9		CO
8-Jul-93	1000	9 days	9.72	88.8		CO

H & A FORM JAN. 79 59A

HALEY & ALDRICH, INC.
CAMBRIDGE, MASSACHUSETTS

GROUND WATER MONITORING REPORT

OW/PZ NUMBER: MW-1

ELEVATION SUBTRAHEND 99

FILE NO. 11135-40/41
PAGE NO. 1

DATE	TIME	ELAPSED TIME	DEPTH OF WATER FROM Ground surface	ELEVATION OF WATER	REMARKS	READ BY
1-Jul-93	1300	1 hr.	7.34 ft.	91.7		CO
7-Jul-93	1411	6 days	10.38	88.6		CO

H&A FORM JAN. 79 59A

HALEY & ALDRICH, INC.
CAMBRIDGE, MASSACHUSETTS

GROUND WATER MONITORING REPORT

OW/PZ NUMBER: MW-4

ELEVATION SUBTRAHEND 99

FILE NO. 11135-40/41

PAGE NO. 1

DATE	TIME	ELAPSED TIME	DEPTH OF WATER FROM Ground surface	ELEVATION OF WATER	REMARKS	READ BY
30-Jun-93	1200	0 hrs.	9.65	89.4		CO
8-Jul-93	0950	8 days	9.75	89.3		CO

H & A FORM JAN. 70 59.

DWR-133M (7/92) 34250 0124834

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

Permit No. +U

MONITORING WELL PERMIT

2929459

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

(HAD) COORD #: 29 23.127

Owner: U.S. Dept. of the Navy
Address: U.S. Navy Weapons Station (Earle)
Colt Neck, N.J.

Driller: Warren George Inc.
Address: P.O. Box 413
Jersey City, N.J. 07303

Name of Facility: Navy Weapons Sta. (Earle)
Address: Colt Neck, N.J.
07722-5000

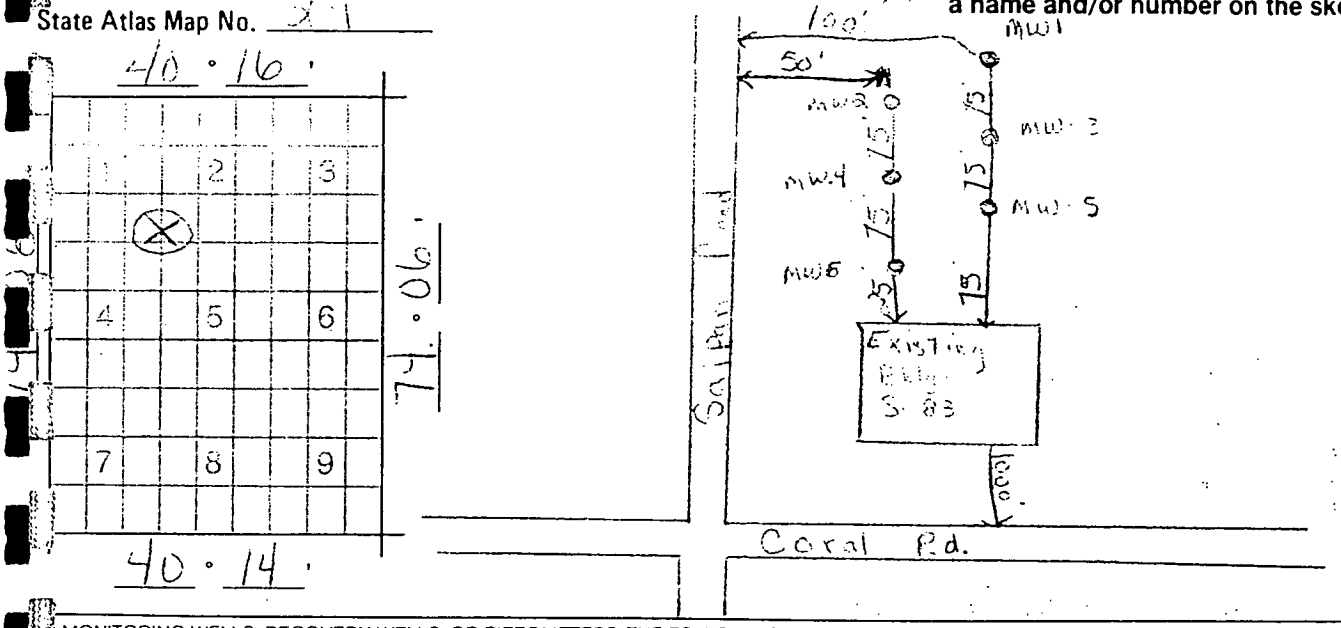
Diameter of Well(s): 2" Inches	Proposed Depth of Well(s): 20' Feet
# of Wells Applied for (max. 10): 6	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse): Monitoring	If Yes, give pump capacity ____ GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
[illegible]	[illegible]	Colt Neck	Monmouth

State Atlas Map No. 29

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



IF MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ RCRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) Construction of building [illegible]

Case I.D. Number

This Space for Approval Stamp

FOR D.E.P.E. USE
- ☒ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 15 feet of total screen or uncased borehole.
- ☐

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date: 10/24/92

Signature of Driller: [signature] License # 0805

Signature of Owner: [signature]

COPIES: Water Allocation — White and Pink — Yellow

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 - 29858
Atlas Sheet Coordinates 29 : 23 : 127

OWNER IDENTIFICATION - Owner U.S. DEPT. OF THE NAVY
Address U.S. NAVY WEAPONS STATION(EARL
City COLTS NECK State NJ Zip Code 07722

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 5
County MONMOUTH Municipality COLTS NECK TWP Lot No. N/A Block No. N/A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/23/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 17 ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	7'	2"	SCH 40 PVC
Outer Casing (Not Protective Casing)	N/A	—	—	—
Screen (Note slot size)	7'	17'	2"	.020 SLOT
Tail Piece	N/A	—	—	—
Gravel Pack	7'	17'		Morie Sand #2
Annular Seal/Grout	0'	7'		Cement/Bentonite
Method of Grouting				Tremie

Static water level after drilling 7' ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig
Name of Driller
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. [illegible]
Name of Drilling Company WARREN GEORGE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'/6'6"	Miscellaneous Fill
6'6"/7'	Brown Tan Clay [illegible]
7'/17'	Fine to Coarse Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 7/20/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

BWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 - 29857
Atlas Sheet Coordinates 29 : 23 : 127

OWNER IDENTIFICATION - Owner U.S. DEPT. OF THE NAVY
Address U.S. NAVY WEAPONS STATION/EARL
City COLTS NECK State NJ Zip Code 07722

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 4
County MONMOUTH Municipality COLTS NECK TWP Lot No. N/A Block No. N/A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/30/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 27 ft.
Well finished to 27 ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	17'	2"	SCH.40 PVC
Outer Casing (Not Protective Casing)	N/A	—		
Screen (Note slot size)	17'	27'	2"	.020 SLOT
Tail Piece	N/A	—		
Gravel Pack	17'	27'		#2 Dry Sand
Annual Seal/Grout	0	17		Cement/Bentonite
Method of Grouting	Tremie			

Static water level after drilling 7 ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid Type of Rig Mobile
Name of Driller Joseph Kurzyna
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1250
Name of Drilling Company WARREN GEOLOGIC INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0/5' Misc. Fill
5/7' Black organic silt F + M sand
7/8' Yellow Brown silty clay
8/27' Fine Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 7/20/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

BWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 - 29656
Atlas Sheet Coordinates ~~29~~ : ~~23~~ : 127

OWNER IDENTIFICATION - Owner U.S. DEPT. OF THE NAVY
Address U.S. NAVY WEAPONS STATION (EARL
City COLTS NECK State NJ Zip Code 07723

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-3
County MONMOUTH Municipality COLTS NECK TWP Lot No. N/A Block No. N/A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/1/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16' ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	6'	2"	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	—		
Screen (Note slot size)	6'	16	2"	.020 Slot
Tail Piece	N/A	—		
Gravel Pack	6'	16'		#2 Quartz Sand
Annual Seal/Grout	0'	6'		Cement/Bentonite
Method of Grouting	Tremie			

Static water level after drilling 6 ft.
Water level was measured using —
Well was developed for ____ hours at ____ gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☐ No
Pump capacity ____ gpm
Pump type:
Drilling Method Auger
Drilling Fluid ____ Type of Rig B-61
Name of Driller Joseph Kuzemchak
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 4350
Name of Drilling Company WARREN GEOSCIENCE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0'/6'	Dark Silt
6'/8'	Organic Silt Trace Sand
8'/16'	Fine Sand Trace Silt

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 7/20/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

BWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 - 29855 - 29 - 23 - 127
Atlas Sheet Coordinates _____ : _____ : _____

OWNER IDENTIFICATION - Owner U.S. DEPT. OF THE NAVY
Address U.S. NAVY WEAPONS STATION(EARL
City COLTS NECK State NJ Zip Code [illegible]

WELL LOCATION - If not the same as owner please give address. Owner's Well No. [illegible]
County MONMOUTH Municipality COLTS NECK TWP Lot No. N/A Block No. N/A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/12/93
Regulatory Program Requiring Well _____ Case I.D. # _____
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) _____ Tele. # _____

WELL CONSTRUCTION

Total depth drilled 42 ft.
Well finished to 42 ft.
Borehole diameter:
Top 4" in.
Bottom 4" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ——— ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	32'	2"	Sch 40 PVC
Outer Casing (Not Protective Casing)	N/A	—		—
Screen (Note slot size)	32'	42'	2"	.010 slot
Tail Piece	N/A	—		—
Gravel Pack	32'	42'		#2 Silica Sand
Annular Seal/Grout	0'	32'		Cement/Bentonite
Method of Grouting	Tremie			

Static water level after drilling N ft.
Water level was measured using _____
Well was developed for _____ hours at _____ gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity _____ gpm
Pump type: _____
Drilling Method Auger
Drilling Fluid _____ Type of Rig Mobile
Name of Driller [illegible]
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. A1350
Name of Drilling Company WARREN GEORGE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0/5.5	Misc. Fill
5.5/7	Gray Br. Silt Some Sand
7/42	F + M Sand

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature _____ Date 7/20/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

OWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 29854
Atlas Sheet Coordinates ~~29~~ : ~~23~~ : 127

OWNER IDENTIFICATION - Owner U.S. DEPT. OF THE NAVY
Address U.S. NAVY WEAPONS STATION(EARL.
City COLTS NECK State NJ Zip Code 07722

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1
County MONMOUTH Municipality COLTS NECK TWP Lot No. N/A Block No. N/A
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 7/1/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION
Total depth drilled 27' ft.
Well finished to 27' ft.
Borehole diameter:
Top 4 in.
Bottom 4 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0'	17'	2"	Schedule PVC
Outer Casing (Not Protective Casing)	N/A	—		
Screen (Note slot size)	17'	27'	2"	.020 Slot
Tail Piece	N/A	—		
Gravel Pack	17'	27'		#2 Morie Sand
Annular Seal/Grout	0'	17'		Cement/Bentonite
Method of Grouting	Tremie			

Static water level after drilling None ft.
Water level was measured using —
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig CME
Name of Driller Joseph Kinzinger
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. [illegible]
Name of Drilling Company WARREN GROVE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0' Fill
F-M Sand
27'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 7/26/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

APPENDIX E

Soil Analytical Results and Documentation

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

METHOD SUMMARIES

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

METHODOLOGY SUMMARY

PARAMETER	REFERENCES
Alumina Column Cleanup and Separation of Petroleum Wastes	Test Methods for Evaluating Solid Wastes: Vol. IB, USEPA SW-846, 1986, Method 3611.
Volatile Organics (GC/MS)	Test Methods for Evaluating Solid Wastes: Vol. IB, USEPA SW-846, 1986, Method 8240. Test Methods for Evaluating Solid Wastes Physical/Chemical Methods: 2nd ed., USEPA SW-846, 1982, Methods 5020 and 5030. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 624", July 1, 1988. USEPA Contact Laboratory Program (CLP) Statement of Work for Organics Analysis, 9/88.
Semi-Volatile Organics (GC/MS)	Test Methods for Evaluating Solid Wastes Physical/Chemical Methods: 2nd ed., USEPA SW-846, 1982, Method 8270. Test Methods for Evaluating Solid Wastes: Vol. IB, USEPA SW-846, 1986, Method 3550. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 625", July 1, 1988. USEPA Contact Laboratory Program (CLP) Statement of Work for Organic Analysis, 9/88.
Volatile Aromatics (GC)	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater: USEPA 600/4-81-057, 1981, Method 503.1. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 602", July 1, 1988.
TCLP (Toxicity Characteristics Leachate Procedure)	Title 40 CFR Part 261 "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions; Final Rule", June 29, 1990.
Percent Solids	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 160.3. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 92-94, Method 209A, (1985).

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METHODOLOGY SUMMARY

PETROLEUM HYDROCARBONS BY GC-FID

California Department of Health Services Analyical Method for Total Petroleum Hydrocarbon Analysis by GC/FID (modified for use with capillary or Megabore Column) and Test Methods for Evaluating Solid Wastes; Vol. IA USEPA SW-846, 1986, Method 8015 (modified).

PARAMETER	REFERENCES
Methanol Parameters	Methanol Analysis is performed by Direct Aqueous Injection Technique. Separation is performed on a RTX-1 Chromatography column and is detected using a Gas Chromatograph with an FID detector.
Pesticides/PCBs (GC)	Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 538-548, Methods 509A, (1985).
	Test Methods for Evaluating Solid Wastes; 2ND ED., USEPA SW-846, 1982, Method 8270.
	Test Methods for Evaluating Solid Wastes; Vol. 1B, USEPA SW-846, 1986, Method 8080.
	Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Water Act, Method 608", July 1, 1988.
PCBs in Oil Matrix (GC)	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-81-045, 1982.
Herbicides (GC)	Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 554-569, Method 509b, (1985).

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METHODOLOGY SUMMARY

INORGANIC PARAMETER	REFERENCES
Metals	Methods of Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Section 200. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 148-179, Methods 302A through D, 303A through F, and 304, (1985). Test Methods for Evaluating Solid Wastes; Vol. 1A USEPA SW-846, 1986, Chapters 3.2 and 3.3. Title 40 CFR Part 141 " National Primary Drinking Water Regulation, Section 141.23", July 1, 1988.
TCLP (Toxicity Characteristics Leachate Procedure)	Title 40 CFR Part 261 "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions; Final Rule", June 29, 1990.
E.P. TOXICITY METALS	Test Methods for Evaluating Solid Wastes; Vol. 1A USEPA SW-846, 1986, Method 1310.
Hexavalent Chromium	Test Methods for Evaluating Solid Wastes; 2nd.ed., USEPA SW-846, Method 3060.

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LABORATORY CHRONICLE

ANA Lab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111, Fax: (908) 225-4110

LABORATORY CHRONICLE

CLIENT: HALEY & ALDRICH, INC.

REPORT NO.: 93-07-0013

SAMPLING DATE: 7/01/93

DATE RECEIVED BY LABORATORY: 7/01/93

LAB SAMPLE ID	EXTRACTION DATE	CLIENT SAMPLE DESIGNATION	PARAMETER	DATE ANALYZED	ANALYST
93-07-0013-1	NA	MW1 S2 4'-6'	TS	7/07/93	MO
93-07-0013-2	"	MW1 S3 6'-8'	"	"	"
93-07-0013-3	"	MW1 S4 8'-10'	"	"	"
93-07-0013-4	"	MW2 S4 7'-9'	"	"	"
93-07-0013-5	"	MW2 S5 9'-11'	"	"	"
93-07-0013-1	7/6,8/93	MW1 S2 4'-6'	PP METALS	7/6-12/93	DR
93-07-0013-2	"	MW1 S3 6'-8'	"	"	"
93-07-0013-3	"	MW1 S4 8'-10'	"	"	"
93-07-0013-4	"	MW2 S4 7'-9'	"	"	"
93-07-0013-5	"	MW2 S5 9'-11'	"	"	"
93-07-0013-1	NA	MW1 S2 4'-6'	TCL/HSL VOA+10	7/14/93	HM,WSH
93-07-0013-2	"	MW1 S3 6'-8'	"	"	"
93-07-0013-3	"	MW1 S4 8'-10'	"	"	"
93-07-0013-4	"	MW2 S4 7'-9'	"	"	"
93-07-0013-5	"	MW2 S5 9'-11'	"	7/09/93	"
93-07-0013-1	7/07/93	MW1 S2 4'-6'	TCL/HSL BNA	7/16/93	BP
93-07-0013-2	"	MW1 S3 6'-8'	"	7/13,16/93	"
93-07-0013-3	"	MW1 S4 8'-10'	"	7/13/93	"
93-07-0013-4	"	MW2 S4 7'-9'	"	7/16/93	"
93-07-0013-5	"	MW2 S5 9'-11'	"	7/13/93	"
93-07-0013-1	7/02/93	MW1 S2 4'-6'	PCBs	7/07/93	JJ
93-07-0013-2	"	MW1 S3 6'-8'	"	"	"
93-07-0013-3	"	MW1 S4 8'-10'	"	7/11/93	"
93-07-0013-4	"	MW2 S4 7'-9'	"	7/12/93	"
93-07-0013-5	"	MW2 S5 9'-11'	"	7/07/93	"
93-07-0013-1	7/02/93	MW1 S2 4'-6'	TCL PEST	7/10,12,15/93	JJ
93-07-0013-2	"	MW1 S3 6'-8'	"	"	"
93-07-0013-3	"	MW1 S4 8'-10'	"	7/10,14/93	"
93-07-0013-4	"	MW2 S4 7'-9'	"	7/10,15/93	"
93-07-0013-5	"	MW2 S5 9'-11'	"	"	"

FORM 99
RH/rd

ANALAB INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

SAMPLE MANAGEMENT LABORATORY CHRONICLE

CLIENT NAME: HALEY & HOLDEN

LAB PROJECT ID: 93-07-13

CLIENT PROJECT: NAVAL STATION EMC

SAMPLE TEMP ON RECEIPT: 4.6 °C

RAS # :

SAMPLE DATE(S): 7-7-93

SAMPLE RECEIVE DATE: 7/1/93

SAMPLE MATRIX: H2O, SOIL,

PAGE 1 OF 1.

CONDITION OF SAMPLES RECEIVED BY LAB	NA	YES	NO	COMMENTS
Cooler Seal Intact	NA	YES	NO	
Samples Received Cool (2-6°C)	NA	YES	NO	
Samples Received Intact		YES	NO	
Sample Labels Match Chain of Custody		YES	NO	
VOAs HCL Preserved as per Label or Custody .	NA	YES	NO	
VOAs w/out Bubbles, Septa TFE Side Down . . .	NA	YES	NO	
Airbill Present, if by Common Carrier.	NA	YES	NO	
Traffic Reports Present if applicable . . .	NA	YES	NO	
Subcontract Analysis Required (Sub COC).		YES	NO	

PRESERVATION CHECKS PERFORMED FOR AQUEOUS SAMPLES NEEDING PH ADJUSTMENT

N/A = IF NOT APPLICABLE

LAB SAMPLE	FRACTION	PH MEASURED	OK	COMMENTS BY SM ON RECEIPT

Note: NA = Not Applicable or Not Available from Chain of Custody

Sample Custodian Signature

7/1/93
Date

A:\smlc

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

93 - 07 - 0013

		No	Yes
1.	GC/MS Tune Specifications		
	a. BFB passed		✓
	b. DFTPP passed		✓
2.	GC/MS Tuning Frequency - Performed every 12 hours		✓
3.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis	✓	see below
4.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds		✓
	b. System Performance Check Compounds	✓	see p 1 of 4
5.	GC/MS Internal Standard Areas - Within limits	✓	see below
6.	Blank Contamination - List compounds for each fraction		
	a. VOA Fraction: see p 1 of 4		
	b. B/N Fraction: no target compounds		
	c. Acid Fraction: " " "		
7.	Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	✓	see p 3 of 4 and p 4 of 4
	a. VOA Fraction: see p 3 of 4		
	b. B/N Fraction: see p 4 of 4		
	c. Acid Fraction: met criteria		
8.	Extraction Holding Time Met		✓
	Comments:		
9.	Analysis Holding Time Met		✓
	Comments:		

Extractable Organics:

Additional Comments: (4a) Max % Diff for CCC for Bis (2 chloroethyl) Ether was not met on 7/16/93 B8068.

(5) Int std area summary of d12-Perylene for 93-07-013-23 was out of QC on 7/13/93. Reanalysis was done on 7/16/93 B8080 and data reported.

(5) A/E method blank and blank spike internal std area summary for d12-Perylene were out on 7/16/93. Samples were reanalyzed on 7/16/93 B8075 and B8076. Reanalysis data reported.

Lab or QA Coodinator: R Immerible QACC Date: 7/26/93

A:QCMSCLST

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

93-07-0013

		No	Yes
1.	GC/MS Tune Specifications		
	a. BFB passed		✓
	b. DFTPP passed		✓
2.	GC/MS Tuning Frequency - Performed every 12 hours		✓
3.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis		✓
4.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds		✓
	b. System Performance Check Compounds	✓	see p 1 of 4
5.	GC/MS Internal Standard Areas - Within limits	✓	see p 1 of 4 and p 2 of 4
6.	Blank Contamination - List compounds for each fraction		
	a. VOA Fraction: see p 1 of 4		
	b. B/N Fraction: no target compounds		
	c. Acid Fraction: " " "		
7.	Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	✓	see below
	a. VOA Fraction: see below		
	b. B/N Fraction: see p 4 of 4		
	c. Acid Fraction: met criteria		
8.	Extraction Holding Time Met		✓
	Comments:		
9.	Analysis Holding Time Met		✓
	Comments:		

Additional Comments: Volatiles (7) The % surrogate recoveries of 1,2 Dichloroethane D-4 and Bromofluorobenzene were out of QC limits for the following samples:

	% surrogate recovery 1,2 Dichloroethane D-4	BFB
93-07-0013-1 A8752	141	39
93-07-0013-1 A8753	155	58
93-07-093-1 A8747		56

The results for 93-07-0013-1 are therefore qualified as estimated.

Lab or QA Coodinator: Jennifer Quackenbush QACC Date: 7/26/93

A:QCMSCLST

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

93 - 07 - 0013

		No	Yes
1.	GC/MS Tune Specifications		
	a. BFB passed		✓
	b. DFTPP passed		✓
2.	GC/MS Tuning Frequency - Performed every 12 hours		✓
3.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis		✓
4.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds		✓
	b. System Performance Check Compounds	✓	see p 1 of 4
5.	GC/MS Internal Standard Areas - Within limits	✓	see p 1 of 4 and p 2 of 4
6.	Blank Contamination - List compounds for each fraction		
	a. VOA Fraction: see p 1 of 4		
	b. B/N Fraction: no target compounds		
	c. Acid Fraction: " " "		
7.	Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	✓	see below
	a. VOA Fraction: see p 3 of 4		
	b. B/N Fraction: see below		
	c. Acid Fraction: met criteria		
8.	Extraction Holding Time Met		✓
	Comments:		
9.	Analysis Holding Time Met		✓
	Comments:		

Extractable Organics:
Additional Comments: The % surrogate recoveries of the following were out of QC limits due to matrix interference: The results therefore for 93-07-0013-1 and 93-07-0013-2 for B/N analysis are qualified as estimated.

Sample	% surrogate recoveries Nitrobenzene D-5	2-Fluorobiphenyl	Terphenyl D14
93-07-0013-2 MS, B8081	0	0	6.3
93-07-0013-1, B8085	0	0	4.6
93-07-0013-1, B8081	5.1	0	4.6
93-07-0013-2, B8022		0	
93-07-0013-2, B8086		0	

Lab or QA Coodinator: L Fummable QACC Date: 7/20/93

A:QCMSCLST

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

NONCONFORMANCE SUMMARY

PROJECT: 93-07-0013

Extractable Organics (BNA Analysis):

The % recoveries of Di-n-Butyl Phthalate was out of QC for Blank spike >B8070 and for 93-07-0013-3 MS, MSD (>B8077 and >B8078) dated 7/16/93.

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NONCONFORMANCE SUMMARY

PROJECT: 93-07-0013

Extractable Organics (BN Analysis):

The % recoveries of Di-n-Butyl Phthalate and N-Nitroso-Di-n-Propylamine were out of QC limits for Blank spike >B8080 and for 93-07-0013-2 MS, MSD >B8081 and B8082 dated 7/16/93.

The % recoveries of 1,4 Dichlorobenzene, 1,2,4 Trichlorobenzene, Acenaphthene were out for 93-07-0013-2 >B8081 dated 7/16/93. Method performance is demonstrated by Method Blank and Blank Spikes recoveries.

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NONCONFORMANCE SUMMARY

PROJECT: 93-07-0013

Extractable Organics (A/E Analysis):

The % recoveries of 2-4 Dinitrotoluene, Di-n-butyl Phthalate and p-chloro-m-cresol were out for 93-07-0013-2 MSD >B8026. The % recoveries of 4-nitrophenol and Pentachlorophenol were out for 93-07-0013-2 MS >B8025. Method performance is demonstrated by Method Blank and Blank Spikes recoveries.

The % recovery of 2 Chlorophenol was out for Blank Spike >B8024 and for 93-07-0013-2 MS, MSD (>B8025 and B8026).

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NONCONFORMANCE SUMMARY

PROJECT: 93-07-0013

GC Extractable Organics (Pesticides Analysis):

Specified detection Limits unobtainable for the following due to dilutions required:

	Compounds
93-07-0013-1	Aldrin Alpha-BHC Beta-BHC Delta-BHC Gamma-BHC Alpha Chlordane Gamma Chlordane PP-DDD PP-DDT Endosulfan-Alpha Heptachlor Heptachlor Epoxide
93-07-0013-2	Aldrin Alpha-BHC Beta-BHC Gamma-BHC Delta-BHC Alpha-Chlordane Gamma-Chlordane PP-DDT Endosulfan-Alpha Heptachlor-Epoxide
93-07-0013-4	Aldrin Alpha-BHC Beta-BHC Delta-BHC Gamma-BHC Alpha-Chlordane Gamma-Chlordane Endosulfan Alpha Heptachlor Heptachlor Epoxide

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NONCONFORMANCE CHECKLIST - GC

PROJECT: 93-07-0013

ANALYSIS: Pesticides

SURROGATE: Dibutyl Chlorendate

SAMPLE ID: 93-07-0013-1 ($\frac{1}{100}$)
93-07-0013-2 ($\frac{1}{20}$)

_____ The above surrogate was out of QC limits due to matrix interference.

✓ The above surrogate was not recovered as the sample required dilution and the DBC surrogate was diluted out.

Method Blank, Blank Spike and Matrix Spike recoveries within limits.

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TABULATED ANALYTICAL RESULTS

GC/MS VOLATILE ORGANICS

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ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TCL/HSL Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich Inc.	LAB SAMPLE ID :	93-07-013-1
SAMPLE ID:	MW1 S2 4'-6'	DATE SAMPLED:	07/01/93
PROJECT:	N/A	DATE RECEIVED:	07/01/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/14/93
DATA FILE :	>A8747	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,HM
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	7.5		6
67-64-1	ACETONE	U		110
75-15-0	CARBON DISULFIDE	U		6
75-35-4	1,1-DICHLOROETHENE	U		6
75-34-3	1,1-DICHLOROETHANE	U		6
156-60-5	TRANS-1,2-DICHLOROETHENE	U		6
156-59-2	CIS-1,2-DICHLOROETHENE	U		6
67-66-3	CHLOROFORM	U		6
107-06-2	1,2-DICHLOROETHANE	U		6
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		6
56-23-5	CARBON TETRACHLORIDE	U		6
108-05-4	VINYL ACETATE	U		55
75-27-4	BROMODICHLOROMETHANE	U		6
78-87-5	1,2-DICHLOROPROPANE	U		6
79-01-6	TRICHLOROETHENE	U		6
71-43-2	BENZENE	U		6
10061-015	CIS-1,3-DICHLOROPROPENE	U		6
124-48-1	DIBROMOCHLOROMETHANE	U		6
10061-026	TRANS-1,3-DICHLOROPROPENE	U		6
79-00-5	1,1,2-TRICHLOROETHANE	U		6
75-25-2	BROMOFORM	U		6
108-10-1	4-METHYL-2-PENTANONE	U		55
591-78-6	2-HEXANONE	U		55
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		6
127-18-4	TETRACHLOROETHENE	U		6
108-88-3	TOLUENE	2.6	J	6
108-90-7	CHLOROBENZENE	U		6
100-41-4	ETHYLBENZENE	1.3	J	6
100-42-5	STYRENE	U		6
1330-20-7	M/P-XYLENE	1.7	J	6
95-47-6	O-XYLENE	U		6

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-07-13-1
A8747

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
	No additional peaks found			

Qualifier (Q):
B - Compound also present in the blank

Comments :

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TCL/HSL Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich Inc.	LAB SAMPLE ID :	93-07-013-2
SAMPLE ID:	MW1 S3 6'-8'	DATE SAMPLED:	07/01/93
PROJECT:	N/A	DATE RECEIVED:	07/01/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/14/93
DATA FILE :	>A8751	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,HM
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	4.0	J	5
67-64-1	ACETONE	U		110
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5
156-59-2	CIS-1,2-DICHLOROETHENE	U		5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		54
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		54
591-78-6	2-HEXANONE	U		54
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
1330-20-7	M/P-XYLENE	U		5
95-47-6	O-XYLENE	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Rang , Estimated Value

"OS

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-07-13-2
A8751

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
	No additional peaks found			

Qualifier (Q):
B - Compound also present in the blank

Comments :

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TCL/HSL Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich Inc.	LAB SAMPLE ID :	93-07-013-3
SAMPLE ID:	MW1 S4 8'-10'	DATE SAMPLED:	07/01/93
PROJECT:	N/A	DATE RECEIVED:	07/01/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/14/93
DATA FILE :	>A8749	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,HM
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		12
74-83-9	BROMOMETHANE	U		12
75-01-4	VINYL CHLORIDE	U		12
75-00-3	CHLOROETHANE	U		12
75-09-2	METHYLENE CHLORIDE	4.3	J	6
67-64-1	ACETONE	U		120
75-15-0	CARBON DISULFIDE	U		6
75-35-4	1,1-DICHLOROETHENE	U		6
75-34-3	1,1-DICHLOROETHANE	U		6
156-60-5	TRANS-1,2-DICHLOROETHENE	U		6
156-59-2	CIS-1,2-DICHLOROETHENE	U		6
67-66-3	CHLOROFORM	U		6
107-06-2	1,2-DICHLOROETHANE	U		6
78-93-3	2-BUTANONE	U		120
71-55-6	1,1,1-TRICHLOROETHANE	U		6
56-23-5	CARBON TETRACHLORIDE	U		6
108-05-4	VINYL ACETATE	U		62
75-27-4	BROMODICHLOROMETHANE	U		6
78-87-5	1,2-DICHLOROPROPANE	U		6
79-01-6	TRICHLOROETHENE	U		6
71-43-2	BENZENE	U		6
10061-015	CIS-1,3-DICHLOROPROPENE	U		6
124-48-1	DIBROMOCHLOROMETHANE	U		6
10061-026	TRANS-1,3-DICHLOROPROPENE	U		6
79-00-5	1,1,2-TRICHLOROETHANE	U		6
75-25-2	BROMOFORM	U		6
108-10-1	4-METHYL-2-PENTANONE	U		62
591-78-6	2-HEXANONE	U		62
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		6
127-18-4	TETRACHLOROETHENE	U		6
108-88-3	TOLUENE	U		6
108-90-7	CHLOROBENZENE	U		6
100-41-4	ETHYLBENZENE	U		6
100-42-5	STYRENE	U		6
1330-20-7	M/P-XYLENE	U		6
95-47-6	O-XYLENE	U		6

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

OS

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-07-13-3
A8749

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
01. 493-02-7	Naphthalene, decahydro-, tra	26.44	6	63
02.	Substituted Naphthalene	27.88	4	

Qualifier (Q):
B - Compound also present in the blank

Comments :

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TCL/HSL Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich Inc.	LAB SAMPLE ID :	93-07-013-4
SAMPLE ID:	MW2 S4 71-91'	DATE SAMPLED:	07/01/93
PROJECT:	N/A	DATE RECEIVED:	07/01/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/14/93
DATA FILE :	>A8750	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,HM
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		12
74-83-9	BROMOMETHANE	U		12
75-01-4	VINYL CHLORIDE	U		12
75-00-3	CHLOROETHANE	U		12
75-09-2	METHYLENE CHLORIDE	6.6		6
67-64-1	ACETONE	4.9	J	120
75-15-0	CARBON DISULFIDE	U		6
75-35-4	1,1-DICHLOROETHENE	U		6
75-34-3	1,1-DICHLOROETHANE	U		6
156-60-5	TRANS-1,2-DICHLOROETHENE	U		6
156-59-2	CIS-1,2-DICHLOROETHENE	U		6
67-66-3	CHLOROFORM	U		6
107-06-2	1,2-DICHLOROETHANE	U		6
78-93-3	2-BUTANONE	U		120
71-55-6	1,1,1-TRICHLOROETHANE	U		6
56-23-5	CARBON TETRACHLORIDE	U		6
108-05-4	VINYL ACETATE	U		60
75-27-4	BROMODICHLOROMETHANE	U		6
78-87-5	1,2-DICHLOROPROPANE	U		6
79-01-6	TRICHLOROETHENE	U		6
71-43-2	BENZENE	U		6
10061-015	CIS-1,3-DICHLOROPROPENE	U		6
124-48-1	DIBROMOCHLOROMETHANE	U		6
10061-026	TRANS-1,3-DICHLOROPROPENE	U		6
79-00-5	1,1,2-TRICHLOROETHANE	U		6
75-25-2	BROMOFORM	U		6
108-10-1	4-METHYL-2-PENTANONE	U		60
591-78-6	2-HEXANONE	U		60
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		6
127-18-4	TETRACHLOROETHENE	U		6
108-88-3	TOLUENE	U		6
108-90-7	CHLOROBENZENE	U		6
100-41-4	ETHYLBENZENE	U		6
100-42-5	STYRENE	U		6
1330-20-7	M/P-XYLENE	U		6
95-47-6	O-XYLENE	U		6

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

05

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-07-13-4
A8750

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
	No additional peaks found			

Qualifier (Q):
B - Compound also present in the blank

Comments :

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TCL/HSL Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich Inc.	LAB SAMPLE ID :	93-07-013-5
SAMPLE ID:	MW2 S5 9'-11'	DATE SAMPLED:	07/01/93
PROJECT:	N/A	DATE RECEIVED:	07/01/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8705	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,HM
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		12
74-83-9	BROMOMETHANE	U		12
75-01-4	VINYL CHLORIDE	U		12
75-00-3	CHLOROETHANE	U		12
75-09-2	METHYLENE CHLORIDE	U		6
67-64-1	ACETONE	31	J	120
75-15-0	CARBON DISULFIDE	U		6
75-35-4	1,1-DICHLOROETHENE	U		6
75-34-3	1,1-DICHLOROETHANE	U		6
156-60-5	TRANS-1,2-DICHLOROETHENE	U		6
156-59-2	CIS-1,2-DICHLOROETHENE	U		6
67-66-3	CHLOROFORM	U		6
107-06-2	1,2-DICHLOROETHANE	U		6
78-93-3	2-BUTANONE	U		120
71-55-6	1,1,1-TRICHLOROETHANE	U		6
56-23-5	CARBON TETRACHLORIDE	U		6
108-05-4	VINYL ACETATE	U		58
75-27-4	BROMODICHLOROMETHANE	U		6
78-87-5	1,2-DICHLOROPROPANE	U		6
79-01-6	TRICHLOROETHENE	U		6
71-43-2	BENZENE	U		6
10061-015	CIS-1,3-DICHLOROPROPENE	U		6
124-48-1	DIBROMOCHLOROMETHANE	U		6
10061-026	TRANS-1,3-DICHLOROPROPENE	U		6
79-00-5	1,1,2-TRICHLOROETHANE	U		6
75-25-2	BROMOFORM	U		6
108-10-1	4-METHYL-2-PENTANONE	U		58
591-78-6	2-HEXANONE	U		58
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		6
127-18-4	TETRACHLOROETHENE	U		6
108-88-3	TOLUENE	U		6
108-90-7	CHLOROBENZENE	U		6
100-41-4	ETHYLBENZENE	U		6
100-42-5	STYRENE	U		6
1330-20-7	M/P-XYLENE	U		6
95-47-6	O-XYLENE	U		6

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-07-13-5
A8705

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
	No addtional peaks found			

Qualifier (Q):
B - Compound also present in the blank

Comments :

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

GC/MS EXTRACTABLE ORGANICS

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ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S2 4'-6'

LAB ID : 93-07-0013-1
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	125J
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	277J
Pyrene	173J
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	241J
3,3'-Dichlorobenzidine	330U
Chrysene	328J
Bis(2-Ethylhexyl) Phthalate	559
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	887
Benzo(K) Fluoranthene	1300
Benzo(A) Pyrene	395
Indeno(1,2,3-CD) Pyrene	921
Dibenzo(A,H) Anthracene	222J
Benzo(G,H,I) Perylene	273J
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S2 4'-6'

LAB ID : 93-07-0013-1
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	1700U
3-Nitroaniline	1700U
4-Nitroaniline	1700U
Benzoic acid	1700U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S2 4'-6'

LAB ID : 93-07-0013-1
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-1Rev 1.90
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ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S3 6'-8'

LAB ID : 93-07-0013-2
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	1650U
1,3-Dichlorobenzene	1650U
1,4-Dichlorobenzene	1650U
1,2-Dichlorobenzene	1650U
Bis(2-chloroisopropyl) Ether	1650U
Hexachloroethane	1650U
N-Nitroso-di-N-dipropylamine	1650U
Nitrobenzene	1650U
Isophorone	1650U
1,2,4-Trichlorobenzene	1650U
Bis(2-Chloroethoxy) Ether	1650U
Naphthalene	1650U
Hexachlorobutadiene	1650U
Hexachlorocyclopentadiene	1650U
2-Chloronaphthalene	1650U
Acenaphthylene	1650U
Dimethyl Phthalate	1650U
2,6-Dinitrotoluene	1650U
Acenaphthene	1650U
2,4-Dinitrotoluene	1650U
4-Chlorophenyl Phenyl Ether	1650U
Diethyl Phthalate	1650U
Fluorene	1650U
N-Nitrosodiphenyl Amine	1650U
4-Bromophenyl Phenyl Ether	1650U
Hexachlorobenzene	1650U
Phenanthrene	1500J
Anthracene	1650U
Di-N-Butyl Phthalate	1650U
Fluoranthene	4260
Pyrene	2570
Butyl Benzyl Phthalate	1650U
Benzo(a) Anthracene	3870
3,3'-Dichlorobenzidine	1650U
Chrysene	5270
Bis(2-Ethylhexyl) Phthalate	384J
Di-N-Octyl Phthalate	1650U
Benzo(B) Fluoranthene	12900
Benzo(K) Fluoranthene	8070
Benzo(A) Pyrene	8120
Indeno(1,2,3-CD) Pyrene	6540
Dibenzo(A,H) Anthracene	596J
Benzo(G,H,I) Perylene	4180
Aniline	1650U
Benzyl Alcohol	1650U
4-Chloroaniline	1650U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S3 6'-8'

LAB ID : 93-07-0013-2
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	1650U
2-Nitroaniline	8500U
3-Nitroaniline	8500U
4-Nitroaniline	8500U
Benzoic acid	8500U
2-methyl Naphthalene	1650U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0013-2
CLIENT PROJECT: NA ANALYSIS DATE: 7/13/93
CLIENT SAMPLE ID: MW1 S3 6'-8' ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

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RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S4 8'-10'

LAB ID : 93-07-0013-3
ANALYSIS DATE: 7/13/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	330U
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	330U
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	330U
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW1 S4 8'-10'

LAB ID : 93-07-0013-3
ANALYSIS DATE: 7/13/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	1700U
3-Nitroaniline	1700U
4-Nitroaniline	1700U
Benzoic acid	1700U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS *** 45

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:**NON-LIQUID**

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0013-3
CLIENT PROJECT: NA ANALYSIS DATE: 7/13/93
CLIENT SAMPLE ID: MW1 S4 8'-10' ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-3Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW2 S4 7'-9'

LAB ID : 93-07-0013-4
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	50.2J
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	56.9J
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	434
Anthracene	142J
Di-N-Butyl Phthalate	330U
Fluoranthene	517
Pyrene	421
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	189J
3,3'-Dichlorobenzidine	330U
Chrysene	253J
Bis(2-Ethylhexyl) Phthalate	108J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	156J
Benzo(K) Fluoranthene	155J
Benzo(A) Pyrene	161J
Indeno(1,2,3-CD) Pyrene	86.2J
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	75.1J
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW2 S4 7'-9'

LAB ID : 93-07-0013-4
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	1700U
3-Nitroaniline	1700U
4-Nitroaniline	1700U
Benzoic acid	1700U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-4

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW2 S4 7'-9'

LAB ID : 93-07-0013-4
ANALYSIS DATE: 7/16/93
ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

FORM 414-4Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW2 S5 9'-11'

LAB ID : 93-07-0013-5
ANALYSIS DATE: 7/13/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	133J
Anthracene	44.4J
Di-N-Butyl Phthalate	330U
Fluoranthene	203J
Pyrene	115J
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	70.2J
3,3'-Dichlorobenzidine	330U
Chrysene	76.0J
Bis(2-Ethylhexyl) Phthalate	48.2J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	71.8J
Benzo(K) Fluoranthene	62.1J
Benzo(A) Pyrene	76.8J
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NA
CLIENT SAMPLE ID: MW2 S5 9'-11'

LAB ID : 93-07-0013-5
ANALYSIS DATE: 7/13/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	1700U
3-Nitroaniline	1700U
4-Nitroaniline	1700U
Benzoic acid	1700U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-5

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0013-5
CLIENT PROJECT: NA ANALYSIS DATE: 7/13/93
CLIENT SAMPLE ID: MW2 S5 9'-11' ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

FORM 414-5Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

GC EXTRACTABLE ORGANICS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 21 1993
PROJECT RECEIPT DATE : 07/01/93

LAB ID:93-07-0013 -001
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 1 S2 4-6'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 21 1993
PROJECT RECEIPT DATE : 07/01/93

LAB ID:93-07-0013 -002
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 1 S3 6-8'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 21 1993
PROJECT RECEIPT DATE : 07/01/93

LAB ID:93-07-0013 -003
ANALYST JJ
ANALYSIS DATE: 7/11/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 1 S4 8-10'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 21 1993
PROJECT RECEIPT DATE : 07/01/93

LAB ID:93-07-0013 -004
ANALYST JJ
ANALYSIS DATE: 7/12/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 2 S4 7-9'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 21 1993
PROJECT RECEIPT DATE : 07/01/93

LAB ID:93-07-0013 -005
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 2 S5 9-11'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 30 1993
PROJECT RECEIPT DATE: 07/01/93

LAB ID: 93-07-0013-001
ANALYST : JJ
ANALYSIS DATE: 7/10,12,15/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 1 S2 4-6'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<3.33	3.33
BHC-alpha	<3.33	3.33
BHC-beta	<3.33	3.33
BHC-gamma (Lindane)	<3.33	3.33
BHC-delta	<3.33	3.33
alpha- Chlordane	<167	167
gamma- Chlordane	<167	167
pp'-DDD	358	167
pp'-DDE	130J	167
pp'-DDT	2060	167
Dieldrin	<3.33	3.33
Endosulfan-alpha	<3.33	3.33
Endosulfan-beta	<3.33	3.33
Endosulfan Sulfate	<3.33	3.33
Endrin	<3.33	3.33
Endrin Aldehyde	<3.33	3.33
Endrin Ketone	<3.33	3.33
Heptachlor	<3.33	3.33
Heptachlor Epoxide	<3.33	3.33
Methoxychlor	<3.33	3.33
Toxaphene	<33.3	33.3

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 30 1993
PROJECT RECEIPT DATE: 07/01/93

LAB ID: 93-07-0013-002
ANALYST : JJ
ANALYSIS DATE: 7/10,12,15/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 1 S3 6-8'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<3.33	3.33
BHC-alpha	<3.33	3.33
BHC-beta	<3.33	3.33
BHC-gamma (Lindane)	<3.33	3.33
BHC-delta	<3.33	3.33
alpha- Chlordane	<3.33	3.33
gamma- Chlordane	<3.33	3.33
pp'-DDD	3.27J	3.33
pp'-DDE	<3.33	3.33
pp'-DDT	103	33.3
Dieldrin	<3.33	3.33
Endosulfan-alpha	<3.33	3.33
Endosulfan-beta	<3.33	3.33
Endosulfan Sulfate	<3.33	3.33
Endrin	<3.33	3.33
Endrin Aldehyde	<3.33	3.33
Endrin Ketone	<3.33	3.33
Heptachlor	<3.33	3.33
Heptachlor Epoxide	<3.33	3.33
Methoxychlor	<3.33	3.33
Toxaphene	<33.3	33.3

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab inc. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 30 1993
PROJECT RECEIPT DATE: 07/01/93

LAB ID: 93-07-0013-003
ANALYST : JJ
ANALYSIS DATE:7/10,14/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW 1 S4 8-10'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 30 1993
PROJECT RECEIPT DATE: 07/01/93

LAB ID: 93-07-0013-004
ANALYST : JJ
ANALYSIS DATE: 7/10,15/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 2 S4 7-9'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<3.33	3.33
BHC-alpha	<3.33	3.33
BHC-beta	<3.33	3.33
BHC-gamma (Lindane)	<3.33	3.33
BHC-delta	<3.33	3.33
alpha- Chlordane	<3.33	3.33
gamma- Chlordane	<3.33	3.33
pp'-DDD	<3.33	3.33
pp'-DDE	<3.33	3.33
pp'-DDT	<3.33	3.33
Dieldrin	<3.33	3.33
Endosulfan-alpha	<3.33	3.33
Endosulfan-beta	<3.33	3.33
Endosulfan Sulfate	<3.33	3.33
Endrin	<3.33	3.33
Endrin Aldehyde	<3.33	3.33
Endrin Ketone	<3.33	3.33
Heptachlor	<3.33	3.33
Heptachlor Epoxide	<3.33	3.33
Methoxychlor	<3.33	3.33
Toxaphene	<33.3	33.3

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

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ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 30 1993
PROJECT RECEIPT DATE: 07/01/93

LAB ID: 93-07-0013-005
ANALYST : JJ
ANALYSIS DATE: 7/10,15/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW 2 S5 9-11'

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

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TABULATED ANALYTICAL RESULTS

METALS ANALYSIS

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
CLIENT ID: MW 1 S2 4-6'
REPORT DATE : JULY 12 1993
PROJECT RECEIVED DATE: 07/01/93

LAB ID: 93-07-0013-001
ANALYST: RS/DR/JD
ANALYSIS DATE: 7/6-12/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	2.9	1.0
Beryllium	0.22	0.1
Cadmium	<2.50	2.5
Chromium	26.5	10.0
Copper	50.4	5.0
Lead	50.4	25.0
Mercury	<0.25	0.25
Nickel	51.5	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	51.5	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME200

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-07-0013-002
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
CLIENT ID: MW 1 S3 6-8' ANALYST: RS/DR/JD
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/6-12/93
PROJECT RECEIVED DATE: 07/01/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	1.5	1.0
Beryllium	0.24	0.1
Cadmium	<2.50	2.5
Chromium	19.5	10.0
Copper	11.9	5.0
Lead	34.7	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	65.1	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
CLIENT ID: MW 1 S4 8-10'
REPORT DATE : JULY 12 1993
PROJECT RECEIVED DATE: 07/01/93

LAB ID: 93-07-0013-003
ANALYST: RS/DR/JD
ANALYSIS DATE: 7/6-12/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	<1.0	1.0
Beryllium	<0.10	0.1
Cadmium	<2.50	2.5
Chromium	<10.0	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	8.6	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-07-0013-004
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
CLIENT ID: MW 2 S4 7-9' ANALYST: RS/DR/JD
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/6-12/93
PROJECT RECEIVED DATE: 07/01/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	1.8	1.0
Beryllium	<0.10	0.1
Cadmium	<2.50	2.5
Chromium	14.2	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	10.7	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-07-0013-005
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
CLIENT ID: MW 2 S5 9-11' ANALYST: RS/DR/JD
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/6-12/93
PROJECT RECEIVED DATE: 07/01/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	1.2	1.0
Beryllium	0.13	0.1
Cadmium	<2.50	2.5
Chromium	17.4	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	13.9	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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TABULATED ANALYTICAL RESULTS

WET CHEMISTRY

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ANALYTICAL REPORT
PERCENT SOLIDS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: NAVAL WEAPONS STATION EARL
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE : 07/01/93

PROJECT: 93-07-0013
ANALYZED BY: MO

CLIENT ID	LAB ID	PERCENT SOLIDS	ANALYSIS DATE
MW 1 S2 4-6'	001	91.2	07/07/93
MW 1 S3 6-8'	002	92.2	07/07/93
MW 1 S4 8-10'	003	81.0	07/07/93
MW 2 S4 7-9'	004	84.3	07/07/93
MW 2 S5 9-11'	005	86.4	07/07/93

WC115

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July 21, 1993

Haley & Aldrich, Inc.
58 Charles Street
Cambridge, MA 02138
Attn: Veronica O' Donnel

Analytical Report: 93-06-0375

Project: Hazmat Storage Facility
NWS Earle
Colts Neck, NJ

This report covers the analyses of four (4) samples submitted to Analab on June 30, 1993. The following analyses were requested:

HSL/TCL VOLATILE ORGANICS + LIBRARY SEARCHES (4)
HSL/TCL BASE NEUTRAL/ACID ORGANICS (4)
PCBs (4)
TCL PESTICIDES (4)
PRIORITY POLLUTANT METALS (4)

Respectfully submitted,

Robert F. Hulit
Manager of Laboratory Services

RH/rd

IV

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LABORATORY DELIVERABLES CHECKLIST

93- 06- 0375

THIS FORM HAS BEEN COMPLETED BY THE LABORATORY AND IS AVAILABLE TO THE ENVIRONMENTAL CONSULTANT TO ACCOMPANY ALL DATA SUBMISSIONS

The following laboratory deliverables are included in this Analytic Report. Any deviations from the accepted methodology and procedure or performance values outside acceptable ranges are summarized in t Non-Conformance Summary.

I.	Report Cover Page, Laboratory Certification and Field Sample to Lab Sample ID Cross Reference	✓
II.	Table of Contents	✓
III.	Chain of Custody Documents	✓
IV.	Methodology Summaries	✓
V.	Laboratory Chronicle and Hold Time Checks	✓
VI.	Non-Conformance Summary	✓
VII.	Tabulated Analytical Results	✓
VIII.	Initial and Continuing Calibration Information	✓
IX.	Tune and Internal Standard Area Summaries (GC/MS)	✓
X.	Quality Control Summary Reports	✓
XI.	Surrogate Recovery Summary	✓
XII.	Raw Data Chromatograms, Blank, QCs and Samples	✓
XIII.	Subsidiary Information (Subcontract if applicable)	NA

J Immerable QA-QC
Laboratory Manager or QA/QC Coordinator

7/23/93
Date

A:\QCCLST
1/93

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ANALYTICAL DATA REPORT PACKAGE

FOR

HALEY & ALDRICH, INC.
CAMBRIDGE, MA 02138

Client Project:NAVAL WEAPONS STATION EARL

Project:COLTS NECK,N.J.

Sample(s) Received Date:07/01/93

LABORATORY SAMPLE ID	SAMPLE DESCRIPTION/LOCATION	SAMPLE DATE/TIME
93-07-0015-001	MW 1 S2 4-6'	07/01/93 , 7:46
93-07-0015-002	MW 1 S3 6-8	07/01/93 , 9:25
93-07-0015-003	MW 1 S4 8-10'	07/01/93 , 12:10
93-07-0015-004	MW 2 S4 7-9'	07/01/93 , 14:15
93-07-0015-005	MW 2 S5 9-11'	07/01/93 , 14:40

LABORATORY NAME: ANALAB, INC.

LABORATORY ID: 12531

MODEF ID:12531	MADEQE ID: M3501	VADGS ID: 90607
PTOOA :11104	RIDHAL ID: M31231	MADES ID: 25049Z-A,B
PAGEF ID:68-566	CTOHS ID: PH-0647	MDDHMH ID: 182

QUALITY CONTROL COORDINATOR: Edith Inumerable
Edith Inumerable
Li Zhang

MANAGER OF LABORATORY SERVICES: Raymond A. Vandenberg Jr.
Raymond A. Vandenberg Jr.

COMMENTS:

NA = NOT AVAILABLE FROM CHAIN OF CUSTODY , NOT APPLICABLE

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CHAIN OF CUSTODY RECORDS

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METHODOLOGY SUMMARY

INORGANIC PARAMETER	REFERENCES
Metals	Methods of Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Section 200. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 148-179, Methods 302A through D, 303A through F, and 304, (1985). Test Methods for Evaluating Solid Wastes; Vol. 1A USEPA SW-846, 1986, Chapters 3.2 and 3.3. Title 40 CFR Part 141 = National Primary Drinking Water Regulation, Section 141.23", July 1, 1988.
TCLP (Toxicity Characteristics Leachate Procedure)	Title 40 CFR Part 261 "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions; Final Rule", June 29, 1990.
E.P. TOXICITY METALS	Test Methods for Evaluating Solid Wastes; Vol. 1A USEPA SW-846, 1986, Method 1310.
Hexavalent Chromium	Test Methods for Evaluating Solid Wastes; 2nd.ed., USEPA SW-846, Method 3060.

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LABORATORY CHRONICLE

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LABORATORY CHRONICLE

CLIENT: HALEY & ALDRICH

REPORT NO.: 93-06-0375

SAMPLING DATE: 6/30/93

DATE RECEIVED BY LABORATORY: 6/30/93

LAB SAMPLE ID	EXTRACTION DATE	CLIENT SAMPLE DESIGNATION	PARAMETER	DATE ANALYZED	ANALYST
93-06-0375-1	NA	MW4 S2 2'-4'	TS	7/01/93	MO
93-06-0375-2	"	MW4 S5 8'-10'	"	"	"
93-06-0375-3	"	MW3 S3 4'-6'	"	"	"
93-06-0375-4	"	MW3 S5 8'-10'	"	"	"
93-06-0375-1	7/6,8/93	MW4 S2 2'-4'	PP METALS	7/6-12/93	DR
93-06-0375-2	"	MW4 S5 8'-10'	"	"	"
93-06-0375-3	"	MW3 S3 4'-6'	"	"	"
93-06-0375-4	"	MW3 S5 8'-10'	"	"	"
93-06-0375-1	NA	MW4 S2 2'-4'	VOA(8240)+10	7/09/93	WSH,BP
93-06-0375-2	"	MW4 S5 8'-10'	"	7/08/93	"
93-06-0375-3	"	MW3 S3 4'-6'	"	"	"
93-06-0375-4	"	MW3 S5 8'-10'	"	7/09/93	"
93-06-0375-1	7/07/93	MW4 S2 2'-4'	BNA	7/12/93	BP
93-06-0375-2	"	MW4 S5 8'-10'	"	"	"
93-06-0375-3	"	MW3 S3 4'-6'	"	"	"
93-06-0375-4	"	MW3 S5 8'-10'	"	"	"
93-06-0375-1	7/02/93	MW4 S2 2'-4'	PCBs	7/13/93	JJ
93-06-0375-2	"	MW4 S5 8'-10'	"	7/07/93	"
93-06-0375-3	"	MW3 S3 4'-6'	"	"	"
93-06-0375-4	"	MW3 S5 8'-10'	"	"	"
93-06-0375-1	7/02/93	MW4 S2 2'-4'	PEST	7/10,14/93	JJ
93-06-0375-2	"	MW4 S5 8'-10'	"	7/10,15/93	"
93-06-0375-3	"	MW3 S3 4'-6'	"	7/10,15/93	"
93-06-0375-4	"	MW3 S5 8'-10'	"	7/10,21/93	"

FORM 99
RH/rd

ANALAB INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

SAMPLE MANAGEMENT LABORATORY CHRONICLE

CLIENT NAME: HALEY & ALDRICH

CLIENT PROJECT: HAZMAT STORAGE FAC.

RAS # :

SAMPLE DATE(S): 6/30/93

SAMPLE MATRIX: H2O, (SOIL)

LAB PROJECT ID: 93-06-3,

SAMPLE TEMP ON RECEIPT: 15.5 °C

SAMPLE RECEIVE DATE: 6/30/93

PAGE 1 OF 1.

CONDITION OF SAMPLES RECEIVED BY LAB	NA	YES	NO	COMMENTS
Cooler Seal Intact	NA	YES	(NO)	
Samples Received Cool (2-6°C)	NA	YES	(NO)	(15.5°C)
Samples Received Intact		(YES)	NO	
Sample Labels Match Chain of Custody		(YES)	NO	
VOAs HCL Preserved as per Label or Custody	(NA)	YES	NO	
VOAs w/out Bubbles, Septa TFE Side Down	(NA)	YES	NO	
Airbill Present, if by Common Carrier	(NA)	YES	NO	
Traffic Reports Present if applicable	(NA)	YES	NO	
Subcontract Analysis Required (Sub COC)		YES	(NO)	

PRESERVATION CHECKS PERFORMED FOR AQUEOUS SAMPLES NEEDING PH ADJUSTMENT

(N/A) = IF NOT APPLICABLE

LAB SAMPLE	FRACTION	PH MEASURED	OK	COMMENTS BY SM ON RECEIPT

Note: NA = Not Applicable or Not Available from Chain of Custody

Sample Custodian Signature

6/30/93
Date

\smlc

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NONCONFORMANCE SUMMARY

PROJECT: 93-06-0375

Volatile Organics Analysis:

Methylene Chloride was found in the analysis of your samples below the MDL. Although it was not found in the Method Blank(s), its presence may be attributed to laboratory contribution.

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NONCONFORMANCE SUMMARY

PROJECT: 93-06-0375

VOLATILE ORGANICS ANALYSIS:

4-methyl-2-Pentanone, 2-Hexanone and m-p-Xylenes were found <MDL in the Method Blank on 7/9/93: >A8688

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NONCONFORMANCE CHECKLIST
Plus Searches

PROJECT: 93-06-035

FRACTION: Volatiles

Compound(s): Acetic Acid Methyl Ester

_____ was found in a library search of your sample(s).

✓ was found in library search of the Method Blank(s).

_____ was also found in the Method Blank(s) indicating laboratory contamination.

_____ was not found in the Method Blank(s), but is a common laboratory solvent. Its presence may be attributable to laboratory contamination.

_____ was not found in the Method Blank(s), but is a common compound found in most detergents. Its presence may be attributable to laboratory contamination.

LISTPLUS

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GC / MS NARRATIVE AND NON-CONFORMANCE SUMMARY

PROJECT: 93-06-0375

ADDITIONAL COMMENTS:

The following compounds were found < MDL in the method Blank on 7/8/93 > A8664:

2-Butanone
1,2 Dichloropropane
4-Methyl 2-Pentanone
trans 1,3 Dichloropropene
Toluene
Cis 1,3 Dichloropropene
1,1,2 Trichloroethane
2-Hexanone
Tetrachloroethene
Dibromochloromethane
Chlorobenzene
Ethyl Benzene
m-p xylenes
o-xylenes
Styrene

Lab or QA Coordinator: Jennifer QACC Date: 7/23/93

Q&A,A:\QCMSCF

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NONCONFORMANCE SUMMARY

PROJECT: 93-06-0375

Extractable Organics Analysis):

The % recovery of Di-n-Butyl Phthalate for Blank Spike >B8076 and 93-07-0013-3 MS, MSD (>B8077 and B8078 were out of QC limits.

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GC ANALYSIS NON-CONFORMANCE SUMMARY

PROJECT: 93-06-0375

TCL PESTICIDES BY 8080

		NO	YES
1.	GC CALIBRATION - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis.		✓
2.	GC CALIBRATION REQUIREMENTS MET Continuing calibration check compounds.		✓
3.	BLANK FREE OF CONTAMINATION		✓
4.	SURROGATE RECOVERIES MEET CRITERIA		✓
5.	ANALYSIS HOLDING TIME MET		✓

COMMENT:

Pesticides:

ADDITIONAL COMMENTS: Due to matrix interference, 93-06-0375-1 was diluted resulting to elevated MDLs for alpha and Gamma Chlordane and 93-06-0375-2 for pp DDD and pp DDT.

QA/QC Ellmmerable & ACC DATE: 7/23/93

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GC ANALYSIS NON-CONFORMANCE SUMMARY

PROJECT: 93 - 06 - 0375

TCL PESTICIDES BY 8080

		NO	YES
1.	GC CALIBRATION - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis.		✓
2.	GC CALIBRATION REQUIREMENTS MET Continuing calibration check compounds.		✓
3.	BLANK FREE OF CONTAMINATION		✓
4.	SURROGATE RECOVERIES MEET CRITERIA		✓
5.	ANALYSIS HOLDING TIME MET		✓

COMMENT:

Pesticides:

ADDITIONAL COMMENTS: Due to matrix interference, sample 93-06-0375-3 was diluted resulting to elevated MRLs for the following compounds:

Aldrin, Beta-BHC, Gamma-chlordane, alpha-BHC, Delta-BHC, Endosulfan-alpha, Gamma-BHC, alpha-chlordane, Heptachlor, Heptachlor Epoxide

22

QA/QC [illegible] DATE: 7/23/93

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TABULATED ANALYTICAL RESULTS

GC/MS VOLATILE ORGANICS

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ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

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Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-375-1
SAMPLE ID:	MW4 S2 2'-4'	DATE SAMPLED:	06/30/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/30/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8689	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	3.3	J	5.5
67-64-1	ACETONE	U		110
75-15-0	CARBON DISULFIDE	U		5.5
75-35-4	1,1-DICHLOROETHENE	U		5.5
75-34-3	1,1-DICHLOROETHANE	U		5.5
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5.5
156-59-2	CIS-1,2-DICHLOROETHENE	U		5.5
67-66-3	CHLOROFORM	U		5.5
107-06-2	1,2-DICHLOROETHANE	U		5.5
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		5.5
56-23-5	CARBON TETRACHLORIDE	U		5.5
108-05-4	VINYL ACETATE	U		55
75-27-4	BROMODICHLOROMETHANE	U		5.5
78-87-5	1,2-DICHLOROPROPANE	U		5.5
79-01-6	TRICHLOROETHENE	U		5.5
71-43-2	BENZENE	U		5.5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5.5
124-48-1	DIBROMOCHLOROMETHANE	U		5.5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5.5
110-75-8	2-CHLOROETHYL VINYL ETHER	U		11
79-00-5	1,1,2-TRICHLOROETHANE	U		5.5
75-25-2	BROMOFORM	U		5.5
108-10-1	4-METHYL-2-PENTANONE	U		55
591-78-6	2-HEXANONE	U		55
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5.5
127-18-4	TETRACHLOROETHENE	U		5.5
108-88-3	TOLUENE	U		5.5
108-90-7	CHLOROBENZENE	U		5.5
100-41-4	ETHYLBENZENE	U		5.5
100-42-5	STYRENE	U		5.5
1330-20-7	M/P-XYLENE	U		5.5
95-47-6	O-XYLENE	U		5.5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-06-375-1
A8689

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
	No additional peaks found			

Qualifier (Q):
B - Compound also present in the blank

Comments :

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Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-375-2
SAMPLE ID:	MW4 S5 8'-10'	DATE SAMPLED:	06/30/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/30/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/08/93
DATA FILE :	>A8671	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	3.0	J	5.4
67-64-1	ACETONE	U		110
75-15-0	CARBON DISULFIDE	U		5.4
75-35-4	1,1-DICHLOROETHENE	U		5.4
75-34-3	1,1-DICHLOROETHANE	U		5.4
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5.4
156-59-2	CIS-1,2-DICHLOROETHENE	U		5.4
67 66-3	CHLOROFORM	U		5.4
107-06-2	1,2-DICHLOROETHANE	U		5.4
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		5.4
56-23-5	CARBON TETRACHLORIDE	U		5.4
108-05-4	VINYL ACETATE	U		54
75-27-4	BROMODICHLOROMETHANE	U		5.4
78-87-5	1,2-DICHLOROPROPANE	U		5.4
79-01-6	TRICHLOROETHENE	U		5.4
71-43-2	BENZENE	U		5.4
10061-015	CIS-1,3-DICHLOROPROPENE	U		5.4
124-48-1	DIBROMOCHLOROMETHANE	U		5.4
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5.4
110-75-8	2-CHLOROETHYL VINYL ETHER	U		11
79-00-5	1,1,2-TRICHLOROETHANE	U		5.4
75-25-2	BROMOFORM	U		5.4
108-10-1	4-METHYL-2-PENTANONE	U		54
591-78-6	2-HEXANONE	U		54
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5.4
127-18-4	TETRACHLOROETHENE	U		5.4
108 88-3	TOLUENE	U		5.4
108-90-7	CHLOROBENZENE	U		5.4
100-41-4	ETHYLBENZENE	U		5.4
100-42-5	STYRENE	U		5.4
1330 20-7	M/P-XYLENE	U		5.4
95-47-6	O-XYLENE	U		5.4

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-06-375-2
A8671

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
01. 91-20-3	Naphthalene (ACN)(DOT)(8CI9C	26.28	7	87

Qualifier (Q):
B - Compound also present in the blank

Comments :

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-375-3
SAMPLE ID:	MW3 S3 4'-6'	DATE SAMPLED:	06/30/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/30/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/08/93
DATA FILE :	>A8672	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		12
74-83-9	BROMOMETHANE	U		12
75-01-4	VINYL CHLORIDE	U		12
75-00-3	CHLOROETHANE	U		12
75-09-2	METHYLENE CHLORIDE	4.0	J	5.9
67-64-1	ACETONE	U		120
75-15-0	CARBON DISULFIDE	U		5.9
75-35-4	1,1-DICHLOROETHENE	U		5.9
75-34-3	1,1-DICHLOROETHANE	U		5.9
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5.9
156-59-2	CIS-1,2-DICHLOROETHENE	U		5.9
67-66-3	CHLOROFORM	U		5.9
107-06-2	1,2-DICHLOROETHANE	1.2	J	5.9
78-93-3	2-BUTANONE	U		120
71-55-6	1,1,1-TRICHLOROETHANE	U		5.9
56-23-5	CARBON TETRACHLORIDE	U		5.9
108-05-4	VINYL ACETATE	U		59
75-27-4	BROMODICHLOROMETHANE	U		5.9
78-87-5	1,2-DICHLOROPROPANE	U		5.9
79-01-6	TRICHLOROETHENE	U		5.9
71-43-2	BENZENE	U		5.9
10061-015	CIS-1,3-DICHLOROPROPENE	U		5.9
124-48-1	DIBROMOCHLOROMETHANE	U		5.9
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5.9
110-75-8	2-CHLOROETHYL VINYL ETHER	U		12
79-00-5	1,1,2-TRICHLOROETHANE	U		5.9
75-25-2	BROMOFORM	U		5.9
108-10-1	4 METHYL-2-PENTANONE	U		59
591-78-6	2-HEXANONE	U		59
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5.9
127-18-4	TETRACHLOROETHENE	U		5.9
108-88-3	TOLUENE	U		5.9
108-90-7	CHLOROBENZENE	U		5.9
100-41-4	ETHYLBENZENE	U		5.9
100-42-5	STYRENE	U		5.9
1330-20-7	M/P-XYLENE	U		5.9
95-47-6	O-XYLENE	U		5.9

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-06-375-3
A8672

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
	No additional peaks found			

Qualifier (Q):
B - Compound also present in the blank

Comments :

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-375-4
SAMPLE ID:	MW3 S5 8'-10'	DATE SAMPLED:	06/30/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/30/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8690	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	3.4	J	5.7
67-64-1	ACETONE	21	J	110
75-15-0	CARBON DISULFIDE	U		5.7
75-35-4	1,1-DICHLOROETHENE	U		5.7
75-34-3	1,1-DICHLOROETHANE	U		5.7
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5.7
156-59-2	CIS-1,2-DICHLOROETHENE	U		5.7
67-66-3	CHLOROFORM	U		5.7
107-06-2	1,2-DICHLOROETHANE	U		5.7
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		5.7
56-23-5	CARBON TETRACHLORIDE	U		5.7
108-05-4	VINYL ACETATE	U		57
75-27-4	BROMODICHLOROMETHANE	U		5.7
78-87-5	1,2-DICHLOROPROPANE	U		5.7
79-01-6	TRICHLOROETHENE	U		5.7
71-43-2	BENZENE	U		5.7
10061-015	CIS-1,3-DICHLOROPROPENE	U		5.7
124-48-1	DIBROMOCHLOROMETHANE	U		5.7
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5.7
110-75-8	2-CHLOROETHYL VINYL ETHER	U		11
79-00-5	1,1,2-TRICHLOROETHANE	U		5.7
75-25-2	BROMOFORM	U		5.7
108-10-1	4-METHYL-2-PENTANONE	U		57
591-78-6	2-HEXANONE	U		57
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5.7
127-18-4	TETRACHLOROETHENE	U		5.7
108-88-3	TOLUENE	U		5.7
108-90-7	CHLOROBENZENE	U		5.7
100-41-4	ETHYLBENZENE	U		5.7
100-42-5	STYRENE	U		5.7
1330 20 7	M/P-XYLENE	U		5.7
95-47-6	O-XYLENE	U		5.7

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

TABLE 1 : QUALITATIVE RESULTS

TENTATIVELY IDENTIFIED ORGANIC COMPOUNDS
GC/MS ANALYSIS DATA SOIL FRACTION

LAB SAMPLE NUMBER : 93-06-375-4
A8690

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
01. 91-20-3	Naphthalene (ACN)(DOT)(8CI9C	26.23	7	88

Qualifier (Q):
B - Compound also present in the blank

Comments :

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

GC/MS EXTRACTABLE ORGANICS

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT:HALEY & ALDRICH, INC.
CLIENT PROJECT:HAZMAT STORAGE
CLIENT SAMPLE ID:MW4 S2(2-4)

LAB ID : 93-06-0375-1
ANALYSIS DATE:7/12/93
ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	70.4J
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	139J
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	77.4J
Pyrene	78.5J
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	55.7J
3,3'-Dichlorobenzidine	330U
Chrysene	88.4J
Bis(2-Ethylhexyl) Phthalate	54.3J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	133J
Benzo(K) Fluoranthene	121J
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT:HALEY & ALDRICH, INC. LAB ID : 93-06-0375-1
CLIENT PROJECT: HAZMAT STORAGE ANALYSIS DATE:7/12/93
CLIENT SAMPLE ID: MW4 S2(2'-4') ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	97.2J

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

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RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX: NON-LIQUID

CLIENT: HALEY & ALDRICH
CLIENT PROJECT: HAZMAT STORAGE
CLIENT SAMPLE ID: MW4 S2(2'-4')

LAB ID : 93-06-0375-1
ANALYSIS DATE: 7/12/93
ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-1Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT:HALEY & ALDRICH, INC.
CLIENT PROJECT:HAZMAT STORAGE
CLIENT SAMPLE ID:MW4 S5(8-10)

LAB ID : 93-06-0375-2
ANALYSIS DATE:7/12/93
ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	330U
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	330U
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	224J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	~~330U~~
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-2

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT:HAZMAT STORAGE
CLIENT SAMPLE ID:MW4 S5(8-10)

LAB ID : 93-06-0375-2
ANALYSIS DATE: 7/12/93
ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-2
RH/
FORM 413 Part 2, Rev 1.90)

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH
CLIENT PROJECT: HAZMAT STORAGE
CLIENT SAMPLE ID: MW4 S5(8-10)

LAB ID : 93-06-0375-2
ANALYSIS DATE: 7/12/93
ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-2Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT:HALEY & ALDRICH, INC.
CLIENT PROJECT:HAZMAT STORAGE
CLIENT SAMPLE ID:MW3 S3(4-6)

LAB ID : 93-06-0375-3
ANALYSIS DATE:7/12/93
ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	1080
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	1130
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	1030
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	5530
Anthracene	2030
Di-N-Butyl Phthalate	330U
Fluoranthene	6250
Pyrene	4420
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	2710
3,3'-Dichlorobenzidine	330U
Chrysene	2940
Bis(2-Ethylhexyl) Phthalate	79.2J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	3290
Benzo(K) Fluoranthene	2500
Benzo(A) Pyrene	3030
Indeno(1,2,3-CD) Pyrene	1760
Dibenzo(A,H) Anthracene	240J
Benzo(G,H,I) Perylene	1650
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0375-3
CLIENT PROJECT: HAZMAT STORAGE ANALYSIS DATE:7/12/93
CLIENT SAMPLE ID:MW3 S3(4-6) ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	572
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	334

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-3

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH
CLIENT PROJECT: HAZMAT STORAGE
CLIENT SAMPLE ID: MW3 S3(4-6)

LAB ID : 93-06-0375-3
ANALYSIS DATE: 7/12/93
ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

FORM 414-3Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT:HALEY & ALDRICH, INC.
CLIENT PROJECT:HAZMAT STORAGE
CLIENT SAMPLE ID:MW3 S5(8-10)

LAB ID : 93-06-0375-4
ANALYSIS DATE:7/13/93
ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	330U
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	330U
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	61.2J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0375-4
CLIENT PROJECT: HAZMAT STORAGE ANALYSIS DATE:7/13/93
CLIENT SAMPLE ID:MW3 S5(8-10) ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-4

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH
CLIENT PROJECT: HAZMAT STORAGE
CLIENT SAMPLE ID: MW3 S5(8-10)

LAB ID : 93-06-0375-4
ANALYSIS DATE: 7/13/93
ANALYST: BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-4Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

GC EXTRACTABLE ORGANICS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE : 06/30/93

LAB ID:93-06-0375 -001
ANALYST JJ
ANALYSIS DATE: 7/13/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW4 S2(2'-4')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax. (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE : 06/30/93

LAB ID:93-06-0375 -002
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW4 S5(8'-10')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE : 06/30/93

LAB ID:93-06-0375 -003
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW3 S3(4'-6')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE : 06/30/93

LAB ID:93-06-0375 -004
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW3 S5(8'-10')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE: 06/30/93

LAB ID: 93-06-0375-001
ANALYST : JJ
ANALYSIS DATE:7/10,14/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW4 S2(2'-4')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<3.33	3.33
gamma- Chlordane	<3.33	3.33
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	16.7
Methoxychlor	<16.7	16.7
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE: 06/30/93

LAB ID: 93-06-0375-002
ANALYST : JJ
ANALYSIS DATE:7/10,15/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW4 S5(8'-10')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	25.7	3.33
pp'-DDE	<1.67	1.67
pp'-DDT	36.9	3.33
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE: 06/30/93

LAB ID: 93-06-0375-003
ANALYST : JJ
ANALYSIS DATE:7/10,15/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW3 S3(4'-6')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<3.33	3.33
BHC-alpha	<3.33	3.33
BHC-beta	<3.33	3.33
BHC-gamma (Lindane)	<3.33	3.33
BHC-delta	<3.33	3.33
alpha- Chlordane	<3.33	3.33
gamma- Chlordane	<3.33	3.33
pp'-DDD	<3.33	3.33
pp'-DDE	<3.33	3.33
pp'-DDT	<3.33	3.33
Dieldrin	<3.33	3.33
Endosulfan-alpha	<3.33	3.33
Endosulfan-beta	<3.33	3.33
Endosulfan Sulfate	<3.33	3.33
Endrin	<3.33	3.33
Endrin Aldehyde	<3.33	3.33
Endrin Ketone	<3.33	3.33
Heptachlor	<3.33	3.33
Heptachlor Epoxide	<3.33	3.33
Methoxychlor	<3.33	3.33
Toxaphene	<33.3	33.3

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 20 1993
PROJECT RECEIPT DATE: 06/30/93

LAB ID: 93-06-0375-004
ANALYST : JJ
ANALYSIS DATE:7/10,14/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW3 S5(8'-10')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4119

TABULATED ANALYTICAL RESULTS

METALS ANALYSIS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0375-003
CLIENT PROJECT: HAZMAT STORAGE FACILITY
CLIENT ID: MW3 S3(4'-6') ANALYST: RS/DR/JD
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/6-12/93
PROJECT RECEIVED DATE: 06/30/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	2.5	1.0
Beryllium	0.29	0.1
Cadmium	<2.50	2.5
Chromium	16.5	10.0
Copper	10.6	5.0
Lead	48.2	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	69.4	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME200

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0375-004
CLIENT PROJECT: HAZMAT STORAGE FACILITY
CLIENT ID: MW3 S5(8'-10') ANALYST: RS/DR/JD
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/6-12/93
PROJECT RECEIVED DATE: 06/30/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	<1.0	1.0
Beryllium	0.12	0.1
Cadmium	<2.50	2.5
Chromium	11.3	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	23.8	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME200

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

WET CHEMISTRY

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT
PERCENT SOLIDS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FACILITY
REPORT DATE : JULY 14 1993
PROJECT RECEIPT DATE : 06/30/93

PROJECT: 93-06-0375
ANALYZED BY: MO

CLIENT ID	LAB ID	PERCENT SOLIDS	ANALYSIS DATE
MW4 S2(2'-4')	001	90.9	07/01/93
MW4 S5(8'-10')	002	93.2	07/01/93
MW3 S3(4'-6')	003	85.0	07/01/93
MW3 S5(8'-10')	004	88.2	07/01/93

WC115

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL DATA REPORT PACKAGE

FOR

HALEY & ALDRICH, INC.
CAMBRIDGE, MA 02138

Client Project:HAZMAT STORAGE FAC. NWS EARLE, COLT NECK

Project:NA

Sample(s) Received Date:06/29/93

LABORATORY SAMPLE ID	SAMPLE DESCRIPTION/LOCATION	SAMPLE DATE/TIME
93-06-0362-001	MW6-S2(2'-4')	6/29/93 ; 0930
93-06-0362-002	MW6-S4 (6'-8')	6/29/93 ; 0945
93-06-0362-003	MW5-S3 (6'-8')	6/29/93 ; 1410
93-06-0362-004	MW5-S4 (8'-10')	6/29/93 ; 1420

LABORATORY NAME: ANALAB, INC.

LABORATORY ID: 12531

NJDEP ID:12531	MADEQE ID: NJ302	VADGS ID: 00007
NYDOH :11104	RIDHHL ID: NJ12531	NHDES ID: 250492-A,B
PADER ID:68-368	CTDHS ID: PH-0649	MDDHMH ID: 186

QUALITY CONTROL COORDINATOR: E Inumerable
Edith Inumerable
Yi Zhang

MANAGER OF LABORATORY SERVICES: Robert F. Hulit

COMMENTS:

NA = NOT AVAILABLE FROM CHAIN OF CUSTODY / NOT APPLICABLE

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CHAIN OF CUSTODY RECORDS

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METHOD SUMMARIES

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CASE NARRRATIVE/NONCONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

93- 06- 0362

		No	Yes
1.	GC/MS Tune Specifications		
	a. BFB passed		✓
	b. DFTPP passed		✓
2.	GC/MS Tuning Frequency - Performed every 12 hours		✓
3.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis		✓
4.	GC/MS Calibration Requirements	✓	see below
	a. Calibration Check Compounds		
	b. System Performance Check Compounds		✓
5.	GC/MS Internal Standard Areas - Within limits	✓	see below
6.	Blank Contamination - List compounds for each fraction		
	a. VOA Fraction 2 Butanone, 4 methyl-2 pentanone, 2 hexanone m-xylene - MDL only		
	b. B/N Fraction no target compounds		
	c. Acid Fraction " " "		
7.	Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	✓	see prev
	a. VOA Fraction met criteria		
	b. B/N Fraction see 2 of 2		
	c. Acid Fraction met criteria		
8.	Extraction Holding Time Met		✓
	Comments:		
9.	Analysis Holding Time Met		✓
	Comments:		

Additional Comments: Volatiles: (5) The internal std. area summaries of Bromo-chloro-methane, 1,4 DFB and Chlorobenzene D5 plus retention times were out of QC for 93-06-362-2, A8692 on 7/9/93. Reanalysis was done on 7/9/93, A8702 and all QC requirements were met. Data reported.

Extractable organics: Max. % Diff. for CCC for Bis(2-chloroethyl) Ether was not met on 7/14/93, B8661.

(5) The internal std. area summary of d12 Perylene was out on 7/15/93 B8869, B8870 for 93-06-0362-3,4. Reanalysis was done on 7/19/93 7B7988, 7B7983 and data reported. Results are qualified as estimated since the surrogate recovery for BFB was out.

Lab or QA Coodinator: [illegible] QACC Date: 7/21/93

A:QCMSCLST

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

93-06-0362

		No	Yes
1.	GC/MS Tune Specifications		
	a. BFB passed		✓
	b. DFTPP passed		✓
2.	GC/MS Tuning Frequency - Performed every 12 hours		✓
3.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis		✓
4.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds	✓	see p 1 of 2
	b. System Performance Check Compounds		✓
5.	GC/MS Internal Standard Areas - Within limits	✓	see below & p 1 of 2
6.	Blank Contamination - List compounds for each fraction		
	a. VOA Fraction: see p 1 of 2		
	b. B/N Fraction: no target compounds		
	c. Acid Fraction: " " "		
7.	Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	✓	see below
	a. VOA Fraction: met criteria		
	b. B/N Fraction: see below		
	c. Acid Fraction: met criteria		
8.	Extraction Holding Time Met		✓
	Comments:		
9.	Analysis Holding Time Met		✓
	Comments:		

Extractable organics:
Additional Comments: (7b) The 0b surrogate recoveries of 2-4,6 Tribromophenol was out of QC limits for 93-06-362-3, 137988 and 93-03-362-4, 137983. Results are quantified as estimated.

Lab or QA Coodinator: J Immerable QAcc Date: 7/21/93

A:QCMSCLST

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NONCONFORMANCE SUMMARY

PROJECT: 93-06-0362

Extractable Organics Analysis:

The % recovery of Di-n-Butyl Phthalate for Blank Spike >B7993 dated 7/12/93 and for 93-06-0362-1 MS, MSD (>B7994 and >B7995) was out of QC limits.

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GC ANALYSIS NON-CONFORMANCE SUMMARY

PROJECT: 93 - 06 - 0362
Pesticides analysis

		NO	YES
1.	GC CALIBRATION - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis.		✓
2.	GC CALIBRATION REQUIREMENTS MET Continuing calibration check compounds.		✓
3.	BLANK FREE OF CONTAMINATION		✓
4.	SURROGATE RECOVERIES MEET CRITERIA	✓	see non conformance
5.	ANALYSIS HOLDING TIME MET		✓

COMMENT:

ADDITIONAL COMMENTS: Pesticides: Due to matrix interference sample 93-06-0362-4 was diluted resulting to elevated MDLs for the following compounds: aldrin, alpha-BHC, Beta-BHC, Gamma-BHC, Delta-BHC, alpha-chlordane, Gamma-chlordane, Endo sulfan alpha, Heptachlor and Heptachlor Epoxide.

QA/QC: [illegible] DATE: 7/23/93

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GC ANALYSIS NON-CONFORMANCE SUMMARY

PROJECT: 93 - 06 - 0362

PCB Analysis

		NO	YES
1.	GC CALIBRATION - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis.		✓
2.	GC CALIBRATION REQUIREMENTS MET Continuing calibration check compounds.		✓
3.	BLANK FREE OF CONTAMINATION		✓
4.	SURROGATE RECOVERIES MEET CRITERIA		✓
5.	ANALYSIS HOLDING TIME MET		✓

COMMENT:

PCBs:

ADDITIONAL COMMENTS: Due to matrix interference, sample 93-06-0362-4 has to be diluted this resulting to an elevated MDL for Aroclor 1260.

QA/QC [illegible] & ACC DATE: 7/21/93

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NONCONFORMANCE CHECKLIST - GC

PROJECT: 93-06-0362

ANALYSIS: Pesticides

SURROGATE: Dibutyl Chlorendate

SAMPLE ID: 93-06-0362-4

✓ The above surrogate was out of QC limits due to matrix interference.

_____ The above surrogate was not recovered as the sample required dilution and the DBC surrogate was diluted out.

Method Blank, Blank Spike and Matrix Spike recoveries within limits.

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TABULATED ANALYTICAL RESULTS

GC/MS VOLATILE ORGANICS

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ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

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Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-362-1
SAMPLE ID:	MW6 S2 2'-4'	DATE SAMPLED:	06/29/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/29/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8691	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	5.1	J	5.5
67-64-1	ACETONE	6.3	J	110
75-15-0	CARBON DISULFIDE	U		5.5
75-35-4	1,1-DICHLOROETHENE	U		5.5
75-34-3	1,1-DICHLOROETHANE	U		5.5
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5.5
156-59-2	CIS-1,2-DICHLOROETHENE	U		5.5
67-66-3	CHLOROFORM	U		5.5
107-06-2	1,2-DICHLOROETHANE	U		5.5
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		5.5
56-23-5	CARBON TETRACHLORIDE	U		5.5
108-05-4	VINYL ACETATE	U		55
75-27-4	BROMODICHLOROMETHANE	U		5.5
78-87-5	1,2-DICHLOROPROPANE	U		5.5
79-01-6	TRICHLOROETHENE	U		5.5
71-43-2	BENZENE	U		5.5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5.5
124-48-1	DIBROMOCHLOROMETHANE	U		5.5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5.5
110-75-8	2-CHLOROETHYL VINYL ETHER	U		11
79-00-5	1,1,2-TRICHLOROETHANE	U		5.5
75-25-2	BROMOFORM	U		5.5
108-10-1	4-METHYL-2-PENTANONE	U		55
591-78-6	2-HEXANONE	U		55
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5.5
127-18-4	TETRACHLOROETHENE	U		5.5
108-88-3	TOLUENE	U		5.5
108-90-7	CHLOROBENZENE	U		5.5
100-41-4	ETHYLBENZENE	U		5.5
100-42-5	STYRENE	U		5.5
1330-20-7	M/P-XYLENE	U		5.5
95-47-6	O-XYLENE	U		5.5

QUALIFIERS

J Indicates detected below MDL, Estimated Value.
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-362-2
SAMPLE ID:	MW6 S4 6'-8'	DATE SAMPLED:	06/29/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/29/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8702	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		13
74-83-9	BROMOMETHANE	U		13
75-01-4	VINYL CHLORIDE	U		13
75-00-3	CHLOROETHANE	U		13
75-09-2	METHYLENE CHLORIDE	5.5	J	6.3
67-64-1	ACETONE	61	J	130
75-15-0	CARBON DISULFIDE	U		6.3
75-35-4	1,1-DICHLOROETHENE	U		6.3
75-34-3	1,1-DICHLOROETHANE	U		6.3
156-60-5	TRANS-1,2-DICHLOROETHENE	U		6.3
156-59-2	CIS-1,2-DICHLOROETHENE	U		6.3
67-66-3	CHLOROFORM	U		6.3
107-06-2	1,2-DICHLOROETHANE	U		6.3
78-93-3	2-BUTANONE	U		130
71-55-6	1,1,1-TRICHLOROETHANE	U		6.3
56-23-5	CARBON TETRACHLORIDE	U		6.3
108-05-4	VINYL ACETATE	U		63
75-27-4	BROMODICHLOROMETHANE	U		6.3
78-87-5	1,2-DICHLOROPROPANE	U		6.3
79-01-6	TRICHLOROETHENE	U		6.3
71-43-2	BENZENE	U		6.3
10061-015	CIS-1,3-DICHLOROPROPENE	U		6.3
124-48-1	DIBROMOCHLOROMETHANE	U		6.3
10061-026	TRANS-1,3-DICHLOROPROPENE	U		6.3
110-75-8	2-CHLOROETHYL VINYL ETHER	U		13
79-00-5	1,1,2-TRICHLOROETHANE	U		6.3
75-25-2	BROMOFORM	U		6.3
108-10-1	4-METHYL-2-PENTANONE	U		63
591-78-6	2-HEXANONE	U		63
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		6.3
127-18-4	TETRACHLOROETHENE	U		6.3
108-88-3	TOLUENE	6.3		6.3
108-90-7	CHLOROBENZENE	U		6.3
100-41-4	ETHYLBENZENE	U		6.3
100-42-5	STYRENE	U		6.3
1330-20-7	M/P-XYLENE	U		6.3
95-47-6	O-XYLENE	U		6.3

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-362-3
SAMPLE ID:	MW5 S3 6'-8'	DATE SAMPLED:	06/29/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/29/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8693	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		13
74-83-9	BROMOMETHANE	U		13
75-01-4	VINYL CHLORIDE	U		13
75-00-3	CHLOROETHANE	U		13
75-09-2	METHYLENE CHLORIDE	11		6.6
67-64-1	ACETONE	35	J	130
75-15-0	CARBON DISULFIDE	U		6.6
75-35-4	1,1-DICHLOROETHENE	U		6.6
75-34-3	1,1-DICHLOROETHANE	U		6.6
156-60-5	TRANS-1,2-DICHLOROETHENE	U		6.6
156-59-2	CIS-1,2-DICHLOROETHENE	U		6.6
67-66-3	CHLOROFORM	U		6.6
107-06-2	1,2-DICHLOROETHANE	U		6.6
78-93-3	2-BUTANONE	6.9	JB	130
71-55-6	1,1,1-TRICHLOROETHANE	U		6.6
56-23-5	CARBON TETRACHLORIDE	U		6.6
108-05-4	VINYL ACETATE	U		66
75-27-4	BROMODICHLOROMETHANE	U		6.6
78-87-5	1,2-DICHLOROPROPANE	U		6.6
79-01-6	TRICHLOROETHENE	U		6.6
71-43-2	BENZENE	U		6.6
10061-015	CIS-1,3-DICHLOROPROPENE	U		6.6
124-48-1	DIBROMOCHLOROMETHANE	U		6.6
10061-026	TRANS-1,3-DICHLOROPROPENE	U		6.6
110-75-8	2-CHLOROETHYL VINYL ETHER	U		13
79-00-5	1,1,2-TRICHLOROETHANE	U		6.6
75-25-2	BROMOFORM	U		6.6
108-10-1	4-METHYL-2-PENTANONE	U		66
591-78-6	2-HEXANONE	U		66
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		6.6
127-18-4	TETRACHLOROETHENE	U		6.6
108-88-3	TOLUENE	2.6	J	6.6
108-90-7	CHLOROBENZENE	U		6.6
100-41-4	ETHYLBENZENE	2.1	J	6.6
100-42-5	STYRENE	U		6.6
1330-20-7	M/P-XYLENE	2.7	JB	6.6
95-47-6	O-XYLENE	U		6.6

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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Method 8240 Volatile Organics By GC/MS - Non-Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-06-362-4
SAMPLE ID:	MW5 S4 8'-10'	DATE SAMPLED:	06/29/93
PROJECT:	Hazmat Storage	DATE RECEIVED:	06/29/93
SAMPLE VOL. :	5.0g	DATE ANALYZED:	07/09/93
DATA FILE :	>A8694	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	WSH,BP
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/KG	Q	MDL
74-87-3	CHLOROMETHANE	U		11
74-83-9	BROMOMETHANE	U		11
75-01-4	VINYL CHLORIDE	U		11
75-00-3	CHLOROETHANE	U		11
75-09-2	METHYLENE CHLORIDE	5.3	J	5.5
67-64-1	ACETONE	U		110
75-15-0	CARBON DISULFIDE	U		5.5
75-35-4	1,1-DICHLOROETHENE	U		5.5
75-34-3	1,1-DICHLOROETHANE	U		5.5
156-60-5	TRANS-1,2-DICHLOROETHENE	U		5.5
156-59-2	CIS-1,2-DICHLOROETHENE	U		5.5
67-66-3	CHLOROFORM	U		5.5
107-06-2	1,2-DICHLOROETHANE	U		5.5
78-93-3	2-BUTANONE	U		110
71-55-6	1,1,1-TRICHLOROETHANE	U		5.5
56-23-5	CARBON TETRACHLORIDE	U		5.5
108-05-4	VINYL ACETATE	U		55
75-27-4	BROMODICHLOROMETHANE	U		5.5
78-87-5	1,2-DICHLOROPROPANE	U		5.5
79-01-6	TRICHLOROETHENE	U		5.5
71-43-2	BENZENE	U		5.5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5.5
124-48-1	DIBROMOCHLOROMETHANE	U		5.5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5.5
110-75-8	2-CHLOROETHYL VINYL ETHER	U		11
79-00-5	1,1,2-TRICHLOROETHANE	U		5.5
75-25-2	BROMOFORM	U		5.5
108-10-1	4-METHYL-2-PENTANONE	U		55
591-78-6	2-HEXANONE	U		55
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5.5
127-18-4	TETRACHLOROETHENE	U		5.5
108-88-3	TOLUENE	U		5.5
108-90-7	CHLOROBENZENE	U		5.5
100-41-4	ETHYLBENZENE	U		5.5
100-42-5	STYRENE	U		5.5
1330-20-7	M/P-XYLENE	U		5.5
95-47-6	O-XYLENE	U		5.5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TABULATED ANALYTICAL RESULTS

GC/MS EXTRACTABLE ORGANICS

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-06-0362-1
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE: 7/12/93
CLIENT SAMPLE ID: MW6-S2(2-4') ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	330U
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	330U
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	77.8J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-1

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-1
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/12/93
CLIENT SAMPLE ID: MW6-S2(2'-4') ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-1

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:**NON-LIQUID**

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-1
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/12/93
CLIENT SAMPLE ID: MW6-S2(2'-4') ANALYST:BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414 Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-06-0362-2
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE: 7/09/93
CLIENT SAMPLE ID: MW6-S4(6-8) ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	330U
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	330U
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	330U
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-2

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-2
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/09/93
CLIENT SAMPLE ID: MW6-S4(6-8) ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-2

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-2
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/09/93
CLIENT SAMPLE ID: MW6-S4(6'-8') ANALYST:BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-2Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-06-0362-3
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE: 7/09/93
CLIENT SAMPLE ID: MW5-S3(6-8) ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	60.1
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	330U
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	330U
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-3
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/09/93
CLIENT SAMPLE ID: MW5-S3 (6'-8') ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-3

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-3
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/09/93
CLIENT SAMPLE ID: MW5-S3(6'-8') ANALYST:BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-3Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-06-0362-4
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE: 7/09/93
CLIENT SAMPLE ID: MW5-S4(8'-10') ANALYST: BP

COMPOUND	RESULTS (ug/Kg)
Bis(2-Chloroethyl) Ether	330U
1,3-Dichlorobenzene	330U
1,4-Dichlorobenzene	330U
1,2-Dichlorobenzene	330U
Bis(2-chloroisopropyl) Ether	330U
Hexachloroethane	330U
N-Nitroso-di-N-dipropylamine	330U
Nitrobenzene	330U
Isophorone	330U
1,2,4-Trichlorobenzene	330U
Bis(2-Chloroethoxy) Ether	330U
Naphthalene	330U
Hexachlorobutadiene	330U
Hexachlorocyclopentadiene	330U
2-Chloronaphthalene	330U
Acenaphthylene	330U
Dimethyl Phthalate	330U
2,6-Dinitrotoluene	330U
Acenaphthene	330U
2,4-Dinitrotoluene	330U
4-Chlorophenyl Phenyl Ether	330U
Diethyl Phthalate	330U
Fluorene	330U
N-Nitrosodiphenyl Amine	330U
4-Bromophenyl Phenyl Ether	330U
Hexachlorobenzene	330U
Phenanthrene	63.6J
Anthracene	330U
Di-N-Butyl Phthalate	330U
Fluoranthene	50.0J
Pyrene	330U
Butyl Benzyl Phthalate	330U
Benzo(a) Anthracene	330U
3,3'-Dichlorobenzidine	330U
Chrysene	330U
Bis(2-Ethylhexyl) Phthalate	52.2J
Di-N-Octyl Phthalate	330U
Benzo(B) Fluoranthene	330U
Benzo(K) Fluoranthene	330U
Benzo(A) Pyrene	330U
Indeno(1,2,3-CD) Pyrene	330U
Dibenzo(A,H) Anthracene	330U
Benzo(G,H,I) Perylene	330U
Aniline	330U
Benzyl Alcohol	330U
4-Chloroaniline	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-3
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
BASE NEUTRAL/EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-4
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/09/93
CLIENT SAMPLE ID: MW5-S4 (8'-10') ANALYST:BP

COMPOUND	RESULTS (ug/Kg)
Dibenzofuran	330U
2-Nitroaniline	330U
3-Nitroaniline	330U
4-Nitroaniline	330U
Benzoic acid	330U
2-methyl Naphthalene	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***

413-4

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:NON-LIQUID

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-06-0362-4
CLIENT PROJECT: HAZMAT, STORAGE ANALYSIS DATE:7/09/93
CLIENT SAMPLE ID: MW5-S4(8'-10') ANALYST:BP

COMPOUND	Results (ug/Kg)
Phenol	330U
2-Chlorophenol	330U
2-Nitrophenol	330U
2,4-Dimethylphenol	330U
2,4-Dichlorophenol	330U
4-Chloro-3-Methyl Phenol	330U
2,4,6-Trichlorophenol	330U
2,4-Dinitrophenol	1700U
4-Nitrophenol	1700U
2-Methyl-4,6-Dinitrophenol	1700U
Pentachlorophenol	1700U
2,4,5-Trichlorophenol	330U
2-Methyl Phenol	330U
3+4-Methyl Phenol	330U

*** ALL RESULTS ARE REPORTED ON A DRY WEIGHT BASIS ***
FORM 414-4Rev 1.90
RH/rd

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

GC EXTRACTABLE ORGANICS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0362-001
CLIENT PROJECT: HAZMAT STORAGE FAC. NWS EARLE ANALYST : JJ
REPORT DATE : JULY 26 1993 ANALYSIS DATE: 7/10,14/93
PROJECT RECEIPT DATE: 06/29/93 MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW6-S2(2'-4')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FAC. NWS EARLE
REPORT DATE : JULY 26 1993
PROJECT RECEIPT DATE: 06/29/93

LAB ID: 93-06-0362-002
ANALYST : JJ
ANALYSIS DATE:7/10,14/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW6-S4 (6'-8')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0362-003
CLIENT PROJECT: HAZMAT STORAGE FAC. NWS EARLE ANALYST : JJ
REPORT DATE : JULY 26 1993 ANALYSIS DATE:7/10,14/93
PROJECT RECEIPT DATE: 06/29/93 MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW5-S3 (6'-8')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<1.67	1.67
BHC-alpha	<1.67	1.67
BHC-beta	<1.67	1.67
BHC-gamma (Lindane)	<1.67	1.67
BHC-delta	<1.67	1.67
alpha- Chlordane	<1.67	1.67
gamma- Chlordane	<1.67	1.67
pp'-DDD	<1.67	1.67
pp'-DDE	<1.67	1.67
pp'-DDT	<1.67	1.67
Dieldrin	<1.67	1.67
Endosulfan-alpha	<1.67	1.67
Endosulfan-beta	<1.67	1.67
Endosulfan Sulfate	<1.67	1.67
Endrin	<1.67	1.67
Endrin Aldehyde	<1.67	1.67
Endrin Ketone	<1.67	1.67
Heptachlor	<1.67	1.67
Heptachlor Epoxide	<1.67	1.67
Methoxychlor	<1.67	1.67
Toxaphene	<16.7	16.7

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT STORAGE FAC. NWS EARLE
REPORT DATE : JULY 26 1993
PROJECT RECEIPT DATE: 06/29/93

LAB ID: 93-06-0362-004
ANALYST : JJ
ANALYSIS DATE:7/10,15/93
MATRIX :SOIL

CLIENT SAMPLE DESIGNATION: MW5-S4 (8'-10')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
Aldrin	<3.33	3.33
BHC-alpha	<3.33	3.33
BHC-beta	<3.33	3.33
BHC-gamma (Lindane)	<3.33	3.33
BHC-delta	<3.33	3.33
alpha- Chlordane	<3.33	3.33
gamma- Chlordane	<3.33	3.33
pp'-DDD	<3.33	3.33
pp'-DDE	<3.33	3.33
pp'-DDT	<3.33	3.33
Dieldrin	<3.33	3.33
Endosulfan-alpha	<3.33	3.33
Endosulfan-beta	<3.33	3.33
Endosulfan Sulfate	<3.33	3.33
Endrin	<3.33	3.33
Endrin Aldehyde	<3.33	3.33
Endrin Ketone	<3.33	3.33
Heptachlor	<3.33	3.33
Heptachlor Epoxide	<3.33	3.33
Methoxychlor	<3.33	3.33
Toxaphene	<33.3	33.3

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC. LAB ID:93-06-0362 -001
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE ANALYST JJ
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/07/93
PROJECT RECEIPT DATE : 06/29/93 MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW6-S2(2'-4')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
REPORT DATE : JULY 12 1993
PROJECT RECEIPT DATE : 06/29/93

LAB ID:93-06-0362 -002
ANALYST JJ
ANALYSIS DATE: 7/07/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW6-S4 (6'-8')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	<17.0	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC. LAB ID:93-06-0362 -003
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE ANALYST JJ
REPORT DATE : JULY 12 1993 ANALYSIS DATE: 7/07/93
PROJECT RECEIPT DATE : 06/29/93 MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW5-S3 (6'-8')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	21.8	17.0

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
REPORT DATE : JULY 12 1993
PROJECT RECEIPT DATE : 06/29/93

LAB ID:93-06-0362 -004
ANALYST JJ
ANALYSIS DATE: 7/7,12/93
MATRIX : SOIL

CLIENT SAMPLE DESIGNATION: MW5-S4 (8'-10')

COMPOUND	RESULTS(UG/KG)	MDL(UG/KG)
AROCLOR 1016	<17.0	17.0
AROCLOR 1221	<17.0	17.0
AROCLOR 1232	<17.0	17.0
AROCLOR 1242	<17.0	17.0
AROCLOR 1248	<17.0	17.0
AROCLOR 1254	<17.0	17.0
AROCLOR 1260	3550	330

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

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TABULATED ANALYTICAL RESULTS

METALS ANALYSIS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0362-001
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
CLIENT ID: MW6-S2(2'-4') ANALYST: RS/DR/JD
REPORT DATE : JULY 9 1993 ANALYSIS DATE: 7/1-9/93
PROJECT RECEIVED DATE: 06/29/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	<1.0	1.0
Beryllium	<0.10	0.1
Cadmium	<2.50	2.5
Chromium	<10.0	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	7.6	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME200

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0362-002
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
CLIENT ID: MW6-S4 (6'-8') ANALYST: RS/DR/JD
REPORT DATE : JULY 9 1993 ANALYSIS DATE: 7/1-9/93
PROJECT RECEIVED DATE: 06/29/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	<1.0	1.0
Beryllium	<0.10	0.1
Cadmium	<2.50	2.5
Chromium	<10.0	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	8.9	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME200

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
CLIENT ID: MW5-S3 (6'-8')
REPORT DATE : JULY 9 1993
PROJECT RECEIVED DATE: 06/29/93

LAB ID: 93-06-0362-003
ANALYST: RS/DR/JD
ANALYSIS DATE: 7/1-9/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	5.2	1.0
Beryllium	0.25	0.1
Cadmium	<2.50	2.5
Chromium	18.4	10.0
Copper	<5.00	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	126.0	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC. LAB ID: 93-06-0362-004
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
CLIENT ID: MW5-S4 (8'-10') ANALYST: RS/DR/JD
REPORT DATE : JULY 9 1993 ANALYSIS DATE: 7/1-9/93
PROJECT RECEIVED DATE: 06/29/93

PARAMETER	RESULTS (mg/kg)	MDL (mg/kg)
Antimony	<1.0	1.0
Arsenic	<1.0	1.0
Beryllium	<0.10	0.1
Cadmium	<2.50	2.5
Chromium	<10.0	10.0
Copper	5.5	5.0
Lead	<25.0	25.0
Mercury	<0.25	0.25
Nickel	<10.0	10.0
Selenium	<1.0	1.0
Silver	<5.00	5.0
Thallium	<1.0	1.0
Zinc	70.6	5.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.
S = RESULTS BY METHOD OF ADDITION PROCEDURE.
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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TABULATED ANALYTICAL RESULTS

WET CHEMISTRY

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT
PERCENT SOLIDS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: HAZMAT,STORAGE FAC. NWS EARLE
REPORT DATE : JULY 16 1993
PROJECT RECEIPT DATE : 06/29/93

PROJECT: 93-06-0362
ANALYZED BY: MO

CLIENT ID	LAB ID	PERCENT SOLIDS	ANALYSIS DATE
MW6-S2(2'-4')	001	91.7	07/01/93
MW6-S4 (6'-8')	002	78.7	07/01/93
MW5-S3 (6'-8')	003	76.0	07/01/93
MW5-S4 (8'-10')	004	90.6	07/01/93

WC115

APPENDIX F

Groundwater Analytical Results and Documentation

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

July 29,1993

HALEY & ALDRICH, INC.
58 Charles Street
Cambridge, MA 02138
Att: Veronica O'Donnell

Analytical Report: 93-07-0077 Project: 11135-40 NWS EARLE

This report covers the analyses of six (6) samples submitted to Analab on July 8, 1993. The following analyses were requested:

HSL/TCL VOLATILE ORGANICS (6)
HSL/TCL BASE NEUTRAL/ACID ORGANICS (6)
TCL PESTICIDES (6)
PCBs (6)
PRIORITY POLLUTANT METALS (6)

Respectfully submitted,

Raymond A. Varsolona Jr.
Robert F. Hulit
Manager of Laboratory Services

RH/ma

LABORATORY DELIVERABLES CHECKLIST

93- 07- 0077

THIS FORM HAS BEEN COMPLETED BY THE LABORATORY AND IS AVAILABLE TO THE ENVIRONMENTAL CONSULTANT TO ACCOMPANY ALL DATA SUBMISSIONS

The following laboratory deliverables are included in this Analytical Report. Any deviations from the accepted methodology and procedures or performance values outside acceptable ranges are summarized in the Non-Conformance Summary.

I.	Report Cover Page, Laboratory Certification and Field Sample to Lab Sample ID Cross Reference	✓
II.	Table of Contents	✓
III.	Chain of Custody Documents	✓
IV.	Methodology Summaries	✓
V.	Laboratory Chronicle and Hold Time Checks	✓
VI.	Non-Conformance Summary	✓
VII.	Tabulated Analytical Results	✓
VIII.	Initial and Continuing Calibration Information	✓
IX.	Tune and Internal Standard Area Summaries (GC/MS)	✓
X.	Quality Control Summary Reports	✓
XI.	Surrogate Recovery Summary	✓
XII.	Raw Data Chromatograms, Blank, QCs and Samples	✓
XIII.	Subsidiary Information (Subcontract if applicable)	WA

E Immerable DVCC
Laboratory Manager or QA/QC Coordinator

7/31/93
Date

A:\QCCLST
1/93

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL DATA REPORT PACKAGE

FOR

HALEY & ALDRICH, INC.
CAMBRIDGE, MA 02138

Client Project:11135-40 NWS EARLE

Project:N/A

Sample(s) Received Date:07/08/93

LABORATORY SAMPLE ID	SAMPLE DESCRIPTION/LOCATION	SAMPLE DATE/TIME
93-07-0077-001	MW1	7/7/93 ; 1530
93-07-0077-002	MW2	7/7/93 ; 1645
93-07-0077-003	MW3	7/8/93 ; 0930
93-07-0077-004	MW4	7/8/93 ; 1015
93-07-0077-005	MW5	7/8/93 ; 1110
93-07-0077-006	MW6	7/8/93 ; 1145

LABORATORY NAME: ANALAB, INC.

LABORATORY ID: 12531

NJDEP ID:12531	MADEQE ID: NJ302	VADGS ID: 00007
NYDOH :11104	RIDHHL ID: NJ12531	NHDES ID: 250492-A,B
PADER ID:68-368	CTDHS ID: PH-0649	MDDHMH ID: 186

QUALITY CONTROL COORDINATOR: E Inumerable
Edith Inumerable
Yi Zhang

MANAGER OF LABORATORY SERVICES: Raymond A Vinsolera for
Robert F. Hulit

COMMENTS:

NA = NOT AVAILABLE FROM CHAIN OF CUSTODY / NOT APPLICABLE

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

TABLE OF CONTENTS

PROJECT NUMBER: 93-07-0077

CHAIN OF CUSTODY RECORDS

METHOD SUMMARIES

LABORATORY CHRONICLE

NONCONFORMANCE/CASE NARRATIVE SUMMARY

TABULATED ANALYTICAL RESULTS

GC/MS Volatile Organics
GC/MS Extractable Organics
GC Extractable Organics
METALS ANALYSIS

GC/MS TUNE, CALIBRATION, AND INTERNAL STANDARD AREA SUMMARIES

GC/MS Volatile Organics - BFB
GC/MS Extractable Organics - DFTPP

GC INITIAL & CONTINUING CALIBRATION REPORTS

GC Extractable Organics

METALS INITIAL & CONTINUING CALIBRATION & BLANK SUMMARY

QUALITY CONTROL SUMMARY REPORTS

GC/MS Volatile Organics QC Summary
GC/MS Extractable Organics QC Summary
GC Extractable Organics QC Summary
Metals QC Summary

RAW DATA

GC/MS Volatile Organics Raw Data
GC/MS Extractable Organics Raw Data
GC Extractable Organics

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CHAIN OF CUSTODY RECORDS

ANALAB INC.

205 Campus Plaza 1, Raritan Center, Edison, New Jersey 08837 (908) 225-4111
ENVIRONMENTAL ANALYTICAL LABORATORY SERVICES FAX (908) 225-4110

CHAIN-OF-CUSTODY RECORD and Work Authorization

LAB SDG NO.: (FOR LAB USE ONLY) 93-07-772

Company: HALEY & ALDRICH, INC.
Address: 58 CHARLES STREET
City: CAMBRIDGE
State: MA. ZIP 02138 Phone 617-494-4910
Project Manager: VERONICA O'DONNELL x-738
Project name: 11135-40 NWS Ezrle Purchase Order No.

ANALYSIS REQUESTED

PRINT ANALYSIS; REQUESTS CLEARLY, LEGIBLY AND COMPLETELY.

Page 1 of 1

	SAMPLE DESCRIPTION	TYPE GRB	TYPE COMP	MATRIX TYPE	DATE SAMPLED	TIME	PRES	NO. CONT	ATB	PEST	BNA	METALS	VOA	REMARKS
1	MW 1			Water	7 JUL	15:30			X	X	X	X	X	5 LTRS, 2 VOAS
2	MW 2			Water	7 JUL	16:45			X	X	X	X	X	"
3	MW 3			Water	8 JUL	09:30			X	X	X	X	X	"
4	MW 4			Water	8 JUL	10:15			X	X	X	X	X	"
5	MW 5			Water	8 JUL	11:10			X	X	X	X	X	"
6	MW 6			Water	8 JUL	11:45			X	X	X	X	X	"

FAILURE TO PRINT CLEARLY, LEGIBLY AND COMPLETELY MAY RESULT IN DELAYS. ANY ANALYSIS REQUEST NOT ENTERED COMPLETELY, CLEARLY AND LEGIBLY OR WHICH IS CONFUSING OR AMBIGUOUS MAY RESULT IN DELAYS. SAMPLES CAN NOT BE LOGGED IN AND THE TURNAROUND TIME CLOCK WILL NOT START UNTIL ANY AMBIGUITIES ARE RESOLVED. TO AVOID THIS, PRINT CLEARLY, LEGIBLY AND COMPLETELY.

SAMPLER/SUBMITTER'S STATEMENT: I attest that the proper field sampling procedures were used during the collection of these samples and that the information on this Chain of Custody and the analysis(es) requested are true and correct. Name (print): Charles S Osgood Signature:

RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	REASON:

RELINQUISHED TO LABORATORY BY:	ACCEPTED FOR LAB BY	DATE	TIME
		7/8/93	1:50

REMARKS: RUSH TURNAROUND

RUSH

LABORATORY COMMENTS: (Lab Use Only)

All Samples Received Cool Intact and Properly Preserved

RUSH

DATA DELIVERABLES

☐ Tier I ☐ Tier II ☐ Results Only

☐ ECRA ☒ Other: RTD 4

STANDARD TURNAROUND TIME ☐ (2-3 Weeks)

PRIORITY TURNAROUND TIME AUTHORIZATION

Before submitting samples for expidited T.A.T. you must have requested in advance and received a coded T.A.T. AUTHORIZATION NUMBER from the office of V.P. of Lab Operations.

AUTHORIZATION NO.: 062893-1 12 DAY T.A.T.
T.A.T. AUTHORIZED:

SPECIAL HANDLING: Contact Person: Phone:
FAX: Other:

For Lab Use Only

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White: Lab Yellow: Accounting Pink: Customer/Client

Form 0401 Rev. 7/91

ALAB

CHANGE OF WORK ORDER

te of Contact —	Analab Project No. 93-07-077

ient Name: Haley & Aldrich

ontact Person: Veronica O' Donnell

marks: Clarification of Chain of Custody

CHANGES REQUESTED

ANALAB SAMPLE ID	CLIENT ID	TEST CHANGE REQUESTED/ADDED/DELETE
3-07-077-1		PCB
		PEST
		BNA
		PP METALS
		VOA (8240)
-6		

rson Completing this Form: Marilyn S Date: 7/9/93

IS DOCUMENT IS ENCLOSED TO REFLECT ANY CHANGES THAT HAVE OCCURRED SINCE E ORIGINAL CHAIN OF CUSTODY WAS SIGNED.

ent Contact Mode YES ☐ NOT NECESSARY ☑

tact Made By ☐ TELEPHONE ☐ FAX ☑ OTHER John Masculin

Please signature this Change of Work Order below and Fax back to MARILYN SALGADO at Analab.

PRINTED NAME	SIGNATURE	DATE 7/ /93

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax (908) 225-4110

METHOD SUMMARIES

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

METHODOLOGY SUMMARY

PARAMETER	REFERENCES
Alumina Column Cleanup and Separation of Petroleum Wastes	Test Methods for Evaluating Solid Wastes: Vol. IB, USEPA SW-846, 1986, Method 3611.
Volatile Organics (GC/MS)	Test Methods for Evaluating Solid Wastes: Vol. 1B, USEPA SW-846, 1986, Method 8240. Test Methods for Evaluating Solid Wastes Physical/Chemical Methods: 2nd ed., USEPA SW-846, 1982, Methods 5020 and 5030. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 624", July 1, 1988. USEPA Contact Laboratory Program (CLP) Statement of Work for Organics Analysis, 9/88.
Semi-Volatile Organics (GC/MS)	Test Methods for Evaluating Solid Wastes Physical/Chemical Methods: 2nd ed., USEPA SW-846, 1982, Method 8270. Test Methods for Evaluating Solid Wastes: Vol. 1B, USEPA SW-846, 1986, Method 3550. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 625", July 1, 1988. USEPA Contact Laboratory Program (CLP) Statement of Work for Organic Analysis, 9/88.
Volatile Aromatics (GC)	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater: USEPA 600/4-81-057, 1981, Method 503.1. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 602", July 1, 1988.
TCLP (Toxicity Characteristics Leachate Procedure)	Title 40 CFR Part 261 "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions; Final Rule", June 29, 1990.
Percent Solids	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 160.3. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 92-94, Method 209A, (1985).

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METHODOLOGY SUMMARY

PETROLEUM HYDROCARBONS BY GC-FID

California Department of Health Services Analyical Method for Total Petroleum Hydrocarbon Analysis by GC/FID (modified for use with capillary or Megabore Column) and Test Methods for Evaluating Solid Wastes; Vol. IA USEPA SW-846, 1986, Method 8015 (modified).

PARAMETER	REFERENCES
Methanol Parameters	Methanol Analysis is performed by Direct Aqueous Injection Technique. Separation is performed on a RTX-1 Chromatography column and is detected using a Gas Chromatograph with an FID detector.
Pesticides/PCBs (GC)	Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 538-548, Methods 509A, (1985). Test Methods for Evaluating Solid Wastes; 2ND ED., USEPA SW-846, 1982, Method 8270. Test Methods for Evaluating Solid Wastes; Vol. 1B, USEPA SW-846, 1986, Method 8080. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Water Act, Method 608", July 1, 1988.
PCBs in Oil Matrix (GC)	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-81-045, 1982.
Herbicides (GC)	Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 554-569, Method 509b, (1985).

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METHODOLOGY SUMMARY

INORGANIC PARAMETER	REFERENCES
Metals	Methods of Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Section 200. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 148-179, Methods 302A through D, 303A through F, and 304, (1985). Test Methods for Evaluating Solid Wastes; Vol. 1A USEPA SW-846, 1986, Chapters 3.2 and 3.3. Title 40 CFR Part 141 = National Primary Drinking Water Regulation, Section 141.23", July 1, 1988.
TCLP (Toxicity Characteristics Leachate Procedure)	Title 40 CFR Part 261 "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions; Final Rule", June 29, 1990.
E.P. TOXICITY METALS	Test Methods for Evaluating Solid Wastes; Vol. 1A USEPA SW-846, 1986, Method 1310.
Hexavalent Chromium	Test Methods for Evaluating Solid Wastes; 2nd.ed., USEPA SW-846, Method 3060.

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LABORATORY CHRONICLE

ANALab inc. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

LABORATORY CHRONICLE

CLIENT: HALEY & ALDRICH, INC.

REPORT NO.: 93-07-0077

SAMPLING DATE: 7/7,8/93

DATE RECEIVED BY LABORATORY: 7/8/93

LAB SAMPLE ID	EXTRACTION DATE	CLIENT SAMPLE DESIGNATION	PARAMETER	DATE ANALYZED	ANALYST
93-07-0077-1	NA	MW1	HSL/TCL VOA	7/14/93	SB
93-07-0077-2	"	MW2	"	"	"
93-07-0077-3	"	MW3	"	"	"
93-07-0077-4	"	MW4	"	"	"
93-07-0077-5	"	MW5	"	"	"
93-07-0077-6	"	MW6	"	7/21/93	"
93-07-0077-1	7/9/93	MW1	HSL/TCL BNA	7/20/93	BP
93-07-0077-2	"	MW2	"	"	"
93-07-0077-3	"	MW3	"	"	"
93-07-0077-4	"	MW4	"	"	"
93-07-0077-5	"	MW5	"	"	"
93-07-0077-6	"	MW6	"	7/20,22/93	"
93-07-0077-1	7/12/93	MW1	PCB	7/14/93	JJ
93-07-0077-2	"	MW2	"	"	"
93-07-0077-3	"	MW3	"	"	"
93-07-0077-4	"	MW4	"	"	"
93-07-0077-5	"	MW5	"	"	"
93-07-0077-6	"	MW6	"	"	"
93-07-0077-1	7/12/93	MW1	TCL PEST	7/14/93	JJ
93-07-0077-2	"	MW2	"	"	"
93-07-0077-3	"	MW3	"	"	"
93-07-0077-4	"	MW4	"	"	"
93-07-0077-5	"	MW5	"	"	"
93-07-0077-6	"	MW6	"	"	"
93-07-0077-1	7/9,13/93	MW1	PP METALS	7/12,16/93	DR/JD/AM
93-07-0077-2	"	MW2	"	"	"
93-07-0077-3	"	MW3	"	"	"
93-07-0077-4	"	MW4	"	"	"
93-07-0077-5	"	MW5	"	"	"
93-07-0077-6	"	MW6	"	"	"

FORM 99
RH/ma

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

SAMPLE MANAGEMENT LABORATORY CHRONICLE

CLIENT NAME: Haley + Aldrich, Inc.
LAB PROJECT ID: 93-07-77
CLIENT PROJECT: 11135-40 NWS Earle
SAMPLE TEMP ON RECEIPT: 4 °C
RAS # :
SAMPLE DATE(S): 7/28/93
SAMPLE RECEIVE DATE: 7/8/93
SAMPLE MATRIX: H2O, SOIL,
PAGE 1 OF 1.

CONDITION OF SAMPLES RECEIVED BY LAB	NA	YES	NO	COMMENTS
Cooler Seal Intact	NA	YES	NO	
Samples Received Cool (2-6°C)	NA	YES	NO	
Samples Received Intact		YES	NO	
Sample Labels Match Chain of Custody		YES	NO	
VOAs HCL Preserved as per Label or Custody	NA	YES	NO	
VOAs w/out Bubbles, Septa TFE Side Down	NA	YES	NO	
Airbill Present, if by Common Carrier	NA	YES	NO	
Traffic Reports Present if applicable	NA	YES	NO	
Subcontract Analysis Required (Sub COC)		YES	NO	

PRESERVATION CHECKS PERFORMED FOR AQUEOUS SAMPLES NEEDING PH ADJUSTMENT

N/A = IF NOT APPLICABLE

LAB SAMPLE	FRACTION	PH MEASURED	OK	COMMENTS BY SM ON RECEIPT
1-6	METALS	<2	✓	HNO3

Note: NA = Not Applicable or Not Available from Chain of Custody

Sample Custodian Signature

7/8/93
Date

A:\smlc

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax (908) 225-4110

CASE NARRRATIVE/NONCONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

93-07-0077

		No	Yes
1.	GC/MS Tune Specifications		
	a. BFB passed		✓
	b. DFTPP passed		✓
2.	GC/MS Tuning Frequency - Performed every 12 hours		✓
3.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours before sample analysis		✓
4.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds	✓	see below
	b. System Performance Check Compounds		✓
5.	GC/MS Internal Standard Areas - Within limits		✓
6.	Blank Contamination - List compounds for each fraction		
	a. VOA Fraction: no target compounds		
	b. B/N Fraction: " " "		
	c. Acid Fraction: " " "		
7.	Surrogate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	✓	see below
	a. VOA Fraction: ✓		
	b. B/N Fraction: see below		
	c. Acid Fraction: ✓		
8.	Extraction Holding Time Met		✓
	Comments:		
9.	Analysis Holding Time Met		✓
	Comments:		

Additional Comments: Volatiles: (4c) Max. % Diff. for CCC for vinyl chloride was not met on 1/14/93 (C9033).

Extractable Organics: (7b) The % surrogate recovery of Nitrobenzene D-5 was out of QC limits due to sample matrix interference for sample 93-07-0077-6. The results are therefore qualified as estimated.

Lab or QA Coodinator: G Immerman QACC Date: 7/31/93

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GC / MS NARRATIVE AND NON-CONFORMANCE SUMMARY

PROJECT: 93-07-0077

ADDITIONAL COMMENTS:

Extractable Organics (BNA analysis):
The % recoveries of 2,4 Dinitrotoluene for 93-07-0077-4 MS, MSD (7B8143 and 7B8144) were out of QC limits.
Method Performance is demonstrated by Blank spike recoveries.

Lab or QA Coordinator: E Immerable QACC Date: 7/31/93

Q&A,A:\QCMSCF

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ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

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TCL/HSL Volatile Organics By GC/MS - Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-077-1
SAMPLE ID:	MW1	DATE SAMPLED:	07/07/93
PROJECT:	11135-40 NWS-Earle	DATE RECEIVED:	07/08/93
SAMPLE VOL. :	5.0 mL	DATE ANALYZED:	07/14/93
DATA FILE :	>C9043	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	SB
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/L	Q	MDL
74-87-3	CHLOROMETHANE	U		10
74-83-9	BROMOMETHANE	U		10
75-01-4	VINYL CHLORIDE	U		10
75-00-3	CHLOROETHANE	U		10
75-09-2	METHYLENE CHLORIDE	U		5
67-64-1	ACETONE	U		100
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
540-59-0	CIS/TRANS-1,2-DICHLOROETHENE	U		5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		100
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		50
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		50
591-78-6	2-HEXANONE	U		50
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
108-38-3	M-XYLENE	U		5
1330-20-7	O + P-XYLENES	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TCL/HSL Volatile Organics By GC/MS - Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-077-2
SAMPLE ID:	MW2	DATE SAMPLED:	07/07/93
PROJECT:	11135-40 NWS-Earle	DATE RECEIVED:	07/08/93
SAMPLE VOL. :	5.0mL	DATE ANALYZED:	07/14/93
DATA FILE :	>C9044	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	SB
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/L	Q	MDL
74-87-3	CHLOROMETHANE	U		10
74-83-9	BROMOMETHANE	U		10
75-01-4	VINYL CHLORIDE	U		10
75-00-3	CHLOROETHANE	U		10
75-09-2	METHYLENE CHLORIDE	U		5
67-64-1	ACETONE	U		100
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
540-59-0	CIS/TRANS-1,2-DICHLOROETHENE	U		5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		100
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		50
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		50
591-78-6	2-HEXANONE	U		50
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
108-38-3	M-XYLENE	U		5
1330-20-7	O + P-XYLENES	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TCL/HSL Volatile Organics by GC/MS Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-077-3
SAMPLE ID:	MW3	DATE SAMPLED:	07/08/93
PROJECT:	11135-40 NWS-Earle	DATE RECEIVED:	07/09/93
SAMPLE VOL. :	5.0mL	DATE ANALYZED:	07/14/93
DATA FILE :	>C9045	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	SB
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/L	Q	MDL
74-87-3	CHLOROMETHANE	U		10
74-83-9	BROMOMETHANE	U		10
75-01-4	VINYL CHLORIDE	U		10
75-00-3	CHLOROETHANE	U		10
75-09-2	METHYLENE CHLORIDE	U		5
67-64-1	ACETONE	U		100
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
540-59-0	CIS/TRANS-1,2-DICHLOROETHENE	3.7	J	5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		100
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		50
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		50
591-78-6	2-HEXANONE	U		50
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
108-38-3	M-XYLENE	U		5
1330-20-7	O + P-XYLENES	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TCL/HSL Volatile Organics By GC/MS - Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-077-4
SAMPLE ID:	MW4	DATE SAMPLED:	07/05/93
PROJECT:	11135-40 NWS-Earle	DATE RECEIVED:	07/08/93
SAMPLE VOL. :	5.0 mL	DATE ANALYZED:	07/14/93
DATA FILE :	>C9046	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	SB
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/L	Q	MDL
74-87-3	CHLOROMETHANE	U		10
74-83-9	BROMOMETHANE	U		10
75-01-4	VINYL CHLORIDE	30		10
75-00-3	CHLOROETHANE	U		10
75-09-2	METHYLENE CHLORIDE	U		5
67-64-1	ACETONE	U		100
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
540-59-0	CIS/TRANS-1,2-DICHLOROETHENE	25		5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		100
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		50
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		50
591-78-6	2-HEXANONE	U		50
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
108-38-3	M-XYLENE	U		5
1330-20-7	O + P-XYLENES	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TCL/HSL Volatile Organics By GC/MS - Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-077-5
SAMPLE ID:	MW5	DATE SAMPLED:	07/08/93
PROJECT:	11135-40 NWS-Earle	DATE RECEIVED:	07/08/93
SAMPLE VOL. :	5.0 mL	DATE ANALYZED:	07/14/93
DATA FILE :	>C9047	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	SB
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/L	Q	MDL
74-87-3	CHLOROMETHANE	U		10
74-83-9	BROMOMETHANE	U		10
75-01-4	VINYL CHLORIDE	U		10
75-00-3	CHLOROETHANE	U		10
75-09-2	METHYLENE CHLORIDE	U		5
67-64-1	ACETONE	U		100
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
540-59-0	CIS/TRANS-1,2-DICHLOROETHENE	U		5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		100
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		50
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		50
591-78-6	2-HEXANONE	U		50
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
108-38-3	M-XYLENE	U		5
1330-20-7	O + P-XYLENES	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TCL/HSL Volatile Organics By GC/MS - Aqueous Matrix

CLIENT :	Haley & Aldrich	LAB SAMPLE ID :	93-07-077-8
SAMPLE ID:	MW6	DATE SAMPLED:	07/08/93
PROJECT:	11135-40 NWS-Earle	DATE RECEIVED:	07/08/93
SAMPLE VOL. :	5.0mL	DATE ANALYZED:	07/21/93
DATA FILE :	>C9086	DIL. FACT :	1.00
EXTRACT/DATE :	N/A	ANALYST:	SB
NJDEP LAB ID :	12531		

CAS #	COMPOUND	UG/L	Q	MDL
74-87-3	CHLOROMETHANE	U		10
74-83-9	BROMOMETHANE	U		10
75-01-4	VINYL CHLORIDE	U		10
75-00-3	CHLOROETHANE	U		10
75-09-2	METHYLENE CHLORIDE	U		5
67-64-1	ACETONE	U		100
75-15-0	CARBON DISULFIDE	U		5
75-35-4	1,1-DICHLOROETHENE	U		5
75-34-3	1,1-DICHLOROETHANE	U		5
540-59-0	CIS/TRANS-1,2-DICHLOROETHENE	9.9		5
67-66-3	CHLOROFORM	U		5
107-06-2	1,2-DICHLOROETHANE	U		5
78-93-3	2-BUTANONE	U		100
71-55-6	1,1,1-TRICHLOROETHANE	U		5
56-23-5	CARBON TETRACHLORIDE	U		5
108-05-4	VINYL ACETATE	U		50
75-27-4	BROMODICHLOROMETHANE	U		5
78-87-5	1,2-DICHLOROPROPANE	U		5
79-01-6	TRICHLOROETHENE	U		5
71-43-2	BENZENE	U		5
10061-015	CIS-1,3-DICHLOROPROPENE	U		5
124-48-1	DIBROMOCHLOROMETHANE	U		5
10061-026	TRANS-1,3-DICHLOROPROPENE	U		5
79-00-5	1,1,2-TRICHLOROETHANE	U		5
75-25-2	BROMOFORM	U		5
108-10-1	4-METHYL-2-PENTANONE	U		50
591-78-6	2-HEXANONE	U		50
79-34-5	1,1,2,2-TETRACHLOROETHANE	U		5
127-18-4	TETRACHLOROETHENE	U		5
108-88-3	TOLUENE	U		5
108-90-7	CHLOROBENZENE	U		5
100-41-4	ETHYLBENZENE	U		5
100-42-5	STYRENE	U		5
108-38-3	M-XYLENE	U		5
1330-20-7	O + P-XYLENES	U		5

QUALIFIERS

J Indicates detected below MDL, Estimated Value
U Indicates compound not detected
B Indicates compound also present in blank
E Exceeds Calibration Range, Estimated Value

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TABULATED ANALYTICAL RESULTS

GC/MS EXTRACTABLE ORGANICS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-07-0077-1
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW1 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Bis(2-Chloroethyl) Ether	20U
1,3-Dichlorobenzene	20U
1,4-Dichlorobenzene	20U
1,2-Dichlorobenzene	20U
Bis(2-chloroisopropyl) Ether	20U
Hexachloroethane	20U
N-Nitroso-di-N-dipropylamine	20U
Nitrobenzene	20U
Isophorone	20U
1,2,4-Trichlorobenzene	20U
Bis(2-Chloroethoxy) Methane	20U
Naphthalene	20U
Hexachlorobutadiene	20U
Hexachlorocyclopentadiene	20U
2-Chloronaphthalene	20U
Acenaphthylene	20U
Dimethyl Phthalate	20U
2,6-Dinitrotoluene	20U
Acenaphthene	20U
2,4-Dinitrotoluene	20U
4-Chlorophenyl Phenyl Ether	20U
Diethyl Phthalate	20U
Fluorene	20U
N-Nitrosodiphenyl Amine	20U
4-Bromophenyl Phenyl Ether	20U
Hexachlorobenzene	20U
Phenanthrene	20U
Anthracene	20U
Di-N-Butyl Phthalate	20U
Fluoranthene	20U
Pyrene	20U
Butyl Benzyl Phthalate	20U
Benzo(a) Anthracene	20U
3,3'-Dichlorobenzidine	20U
Chrysene	20U
Bis(2-Ethylhexyl) Phthalate	20U
Di-N-Octyl Phthalate	20U
Benzo(B) Fluoranthene	20U
Benzo(K) Fluoranthene	20U
Benzo(A) Pyrene	20U
Indeno(1,2,3-CD) Pyrene	20U
Dibenzo(A,H) Anthracene	20U
Benzo(G,H,I) Perylene	20U
Aniline	20U
Benzyl Alcohol	20U
4-Chloroaniline	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX:**AQUEOUS**

CLIENT: HALEY & ALDRICH. INC. LAB ID : 93-07-0077-1
CLIENT PROJECT: 11135-40 NWS EARL ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW1 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Dibenzofuran	20U
2-Nitroaniline	100U
3-Nitroaniline	100U
4-Nitroaniline	100U
Benzoic acid	100U
2-methyl Naphthalene	20U

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RH/rd
FORM 412 PART 2, REV 1.90

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0077-1
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW1 ANALYST: BP

COMPOUND	Results (ug/L)
Phenol	20U
2-Chlorophenol	20U
2-Nitrophenol	20U
2,4-Dimethylphenol	20U
2,4-Dichlorophenol	20U
4-Chloro-3-Methyl Phenol	20U
2,4,6-Trichlorophenol	20U
2,4-Dinitrophenol	100U
4-Nitrophenol	100U
4,6-Dinitro-2-Methylphenol	100U
Pentachlorophenol	100U
2,4,5-Trichlorophenol	20U
2-Methyl Phenol	20U
3+4-Methyl Phenol	20U

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RH/rd

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-07-0077-2
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW2 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Bis(2-Chloroethyl) Ether	20U
1,3-Dichlorobenzene	20U
1,4-Dichlorobenzene	20U
1,2-Dichlorobenzene	20U
Bis(2-chloroisopropyl) Ether	20U
Hexachloroethane	20U
N-Nitroso-di-N-dipropylamine	20U
Nitrobenzene	20U
Isophorone	20U
1,2,4-Trichlorobenzene	20U
Bis(2-Chloroethoxy) Methane	20U
Naphthalene	20U
Hexachlorobutadiene	20U
Hexachlorocyclopentadiene	20U
2-Chloronaphthalene	20U
Acenaphthylene	20U
Dimethyl Phthalate	20U
2,6-Dinitrotoluene	20U
Acenaphthene	20U
2,4-Dinitrotoluene	20U
4-Chlorophenyl Phenyl Ether	20U
Diethyl Phthalate	20U
Fluorene	20U
N-Nitrosodiphenyl Amine	20U
4-Bromophenyl Phenyl Ether	20U
Hexachlorobenzene	20U
Phenanthrene	20U
Anthracene	20U
Di-N-Butyl Phthalate	20U
Fluoranthene	20U
Pyrene	20U
Butyl Benzyl Phthalate	20U
Benzo(a) Anthracene	20U
3,3'-Dichlorobenzidine	20U
Chrysene	20U
Bis(2-Ethylhexyl) Phthalate	20U
Di-N-Octyl Phthalate	20U
Benzo(B) Fluoranthene	20U
Benzo(K) Fluoranthene	20U
Benzo(A) Pyrene	20U
Indeno(1,2,3-CD) Pyrene	20U
Dibenzo(A,H) Anthracene	20U
Benzo(G,H,I) Perylene	20U
Aniline	20U
Benzyl Alcohol	20U
4-Chloroaniline	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH. INC. LAB ID : 93-07-0077-2
CLIENT PROJECT: 11135-40 NWS EARL ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW2 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Dibenzofuran	20U
2-Nitroaniline	100U
3-Nitroaniline	100U
4-Nitroaniline	100U
Benzoic acid	100U
2-methyl Naphthalene	20U

412-3
RH/rd
FORM 412 PART 2, REV 1.90

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0077-2
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW2 ANALYST: BP

COMPOUND	Results (ug/L)
Phenol	20U
2-Chlorophenol	20U
2-Nitrophenol	20U
2,4-Dimethylphenol	20U
2,4-Dichlorophenol	20U
4-Chloro-3-Methyl Phenol	20U
2,4,6-Trichlorophenol	20U
2,4-Dinitrophenol	100U
4-Nitrophenol	100U
4,6-Dinitro-2-Methylphenol	100U
Pentachlorophenol	100U
2,4,5-Trichlorophenol	20U
2-Methyl Phenol	20U
3+4-Methyl Phenol	20U

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RH/rd

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-07-0077-3
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW3 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Bis(2-Chloroethyl) Ether	20U
1,3-Dichlorobenzene	20U
1,4-Dichlorobenzene	20U
1,2-Dichlorobenzene	20U
Bis(2-chloroisopropyl) Ether	20U
Hexachloroethane	20U
N-Nitroso-di-N-dipropylamine	20U
Nitrobenzene	20U
Isophorone	20U
1,2,4-Trichlorobenzene	20U
Bis(2-Chloroethoxy) Methane	20U
Naphthalene	20U
Hexachlorobutadiene	20U
Hexachlorocyclopentadiene	20U
2-Chloronaphthalene	20U
Acenaphthylene	20U
Dimethyl Phthalate	20U
2,6-Dinitrotoluene	20U
Acenaphthene	20U
2,4-Dinitrotoluene	20U
4-Chlorophenyl Phenyl Ether	20U
Diethyl Phthalate	20U
Fluorene	20U
N-Nitrosodiphenyl Amine	20U
4-Bromophenyl Phenyl Ether	20U
Hexachlorobenzene	20U
Phenanthrene	2.76J
Anthracene	20U
Di-N-Butyl Phthalate	20U
Fluoranthene	20U
Pyrene	20U
Butyl Benzyl Phthalate	20U
Benzo(a) Anthracene	20U
3,3'-Dichlorobenzidine	20U
Chrysene	20U
Bis(2-Ethylhexyl) Phthalate	20U
Di-N-Octyl Phthalate	20U
Benzo(B) Fluoranthene	20U
Benzo(K) Fluoranthene	20U
Benzo(A) Pyrene	20U
Indeno(1,2,3-CD) Pyrene	20U
Dibenzo(A,H) Anthracene	20U
Benzo(G,H,I) Perylene	20U
Aniline	20U
Benzyl Alcohol	20U
4-Chloroaniline	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH. INC. LAB ID : 93-07-0077-3
CLIENT PROJECT: 11135-40 NWS EARL ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW3 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Dibenzofuran	20U
2-Nitroaniline	100U
3-Nitroaniline	100U
4-Nitroaniline	100U
Benzoic acid	100U
2-methyl Naphthalene	20U

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RH/rd
FORM 412 PART 2, REV 1.90

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX: **AQUEOUS**

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0077-3
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW3 ANALYST: BP

COMPOUND	Results (ug/L)
Phenol	20U
2-Chlorophenol	20U
2-Nitrophenol	20U
2,4-Dimethylphenol	20U
2,4-Dichlorophenol	20U
4-Chloro-3-Methyl Phenol	20U
2,4,6-Trichlorophenol	20U
2,4-Dinitrophenol	100U
4-Nitrophenol	100U
4,6-Dinitro-2-Methylphenol	100U
Pentachlorophenol	100U
2,4,5-Trichlorophenol	20U
2-Methyl Phenol	20U
3+4-Methyl Phenol	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-07-0077-4
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW4 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Bis(2-Chloroethyl) Ether	20U
1,3-Dichlorobenzene	20U
1,4-Dichlorobenzene	20U
1,2-Dichlorobenzene	20U
Bis(2-chloroisopropyl) Ether	20U
Hexachloroethane	20U
N-Nitroso-di-N-dipropylamine	20U
Nitrobenzene	20U
Isophorone	20U
1,2,4-Trichlorobenzene	20U
Bis(2-Chloroethoxy) Methane	20U
Naphthalene	20U
Hexachlorobutadiene	20U
Hexachlorocyclopentadiene	20U
2-Chloronaphthalene	20U
Acenaphthylene	20U
Dimethyl Phthalate	20U
2,6-Dinitrotoluene	20U
Acenaphthene	20U
2,4-Dinitrotoluene	20U
4-Chlorophenyl Phenyl Ether	20U
Diethyl Phthalate	20U
Fluorene	20U
N-Nitrosodiphenyl Amine	20U
4-Bromophenyl Phenyl Ether	20U
Hexachlorobenzene	20U
Phenanthrene	20U
Anthracene	20U
Di-N-Butyl Phthalate	20U
Fluoranthene	20U
Pyrene	20U
Butyl Benzyl Phthalate	20U
Benzo(a) Anthracene	20U
3,3'-Dichlorobenzidine	20U
Chrysene	20U
Bis(2-Ethylhexyl) Phthalate	20U
Di-N-Octyl Phthalate	20U
Benzo(B) Fluoranthene	20U
Benzo(K) Fluoranthene	20U
Benzo(A) Pyrene	20U
Indeno(1,2,3-CD) Pyrene	20U
Dibenzo(A,H) Anthracene	20U
Benzo(G,H,I) Perylene	20U
Aniline	20U
Benzyl Alcohol	20U
4-Chloroaniline	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH. INC. LAB ID : 93-07-0077-4
CLIENT PROJECT: 11135-40 NWS EARL ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW4 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Dibenzofuran	20U
2-Nitroaniline	100U
3-Nitroaniline	100U
4-Nitroaniline	100U
Benzoic acid	100U
2-methyl Naphthalene	20U

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RH/rd
FORM 412 PART 2, REV 1.90

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0077-4
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW4 ANALYST: BP

COMPOUND	Results (ug/L)
Phenol	20U
2-Chlorophenol	20U
2-Nitrophenol	20U
2,4-Dimethylphenol	20U
2,4-Dichlorophenol	20U
4-Chloro-3-Methyl Phenol	20U
2,4,6-Trichlorophenol	20U
2,4-Dinitrophenol	100U
4-Nitrophenol	100U
4,6-Dinitro-2-Methylphenol	100U
Pentachlorophenol	100U
2,4,5-Trichlorophenol	20U
2-Methyl Phenol	20U
3+4-Methyl Phenol	20U

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RH/rd

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-07-0077-5
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW5 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Bis(2-Chloroethyl) Ether	20U
1,3-Dichlorobenzene	20U
1,4-Dichlorobenzene	20U
1,2-Dichlorobenzene	20U
Bis(2-chloroisopropyl) Ether	20U
Hexachloroethane	20U
N-Nitroso-di-N-dipropylamine	20U
Nitrobenzene	20U
Isophorone	20U
1,2,4-Trichlorobenzene	20U
Bis(2-Chloroethoxy) Methane	20U
Naphthalene	20U
Hexachlorobutadiene	20U
Hexachlorocyclopentadiene	20U
2-Chloronaphthalene	20U
Acenaphthylene	20U
Dimethyl Phthalate	20U
2,6-Dinitrotoluene	20U
Acenaphthene	20U
2,4-Dinitrotoluene	20U
4-Chlorophenyl Phenyl Ether	20U
Diethyl Phthalate	4.46J
Fluorene	20U
N-Nitrosodiphenyl Amine	20U
4-Bromophenyl Phenyl Ether	20U
Hexachlorobenzene	20U
Phenanthrene	20U
Anthracene	20U
Di-N-Butyl Phthalate	20U
Fluoranthene	20U
Pyrene	20U
Butyl Benzyl Phthalate	20U
Benzo(a) Anthracene	20U
3,3'-Dichlorobenzidine	20U
Chrysene	20U
Bis(2-Ethylhexyl) Phthalate	20U
Di-N-Octyl Phthalate	20U
Benzo(B) Fluoranthene	20U
Benzo(K) Fluoranthene	20U
Benzo(A) Pyrene	20U
Indeno(1,2,3-CD) Pyrene	20U
Dibenzo(A,H) Anthracene	20U
Benzo(G,H,I) Perylene	20U
Aniline	20U
Benzyl Alcohol	20U
4-Chloroaniline	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH. INC. LAB ID : 93-07-0077-5
CLIENT PROJECT: 11135-40 NWS EARL ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW5 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Dibenzofuran	20U
2-Nitroaniline	100U
3-Nitroaniline	100U
4-Nitroaniline	100U
Benzoic acid	100U
2-methyl Naphthalene	20U

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RH/rd
FORM 412 PART 2, REV 1.90

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0077-5
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW5 ANALYST: BP

COMPOUND	Results (ug/L)
Phenol	20U
2-Chlorophenol	20U
2-Nitrophenol	20U
2,4-Dimethylphenol	20U
2,4-Dichlorophenol	20U
4-Chloro-3-Methyl Phenol	20U
2,4,6-Trichlorophenol	20U
2,4-Dinitrophenol	100U
4-Nitrophenol	100U
4,6-Dinitro-2-Methylphenol	100U
Pentachlorophenol	100U
2,4,5-Trichlorophenol	20U
2-Methyl Phenol	20U
3+4-Methyl Phenol	20U

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RH/rd

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH INC. LAB ID : 93-07-0077-6
CLIENT PROJECT: 11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW6 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Bis(2-Chloroethyl) Ether	20U
1,3-Dichlorobenzene	20U
1,4-Dichlorobenzene	20U
1,2-Dichlorobenzene	20U
Bis(2-chloroisopropyl) Ether	20U
Hexachloroethane	20U
N-Nitroso-di-N-dipropylamine	20U
Nitrobenzene	20U
Isophorone	20U
1,2,4-Trichlorobenzene	20U
Bis(2-Chloroethoxy) Methane	20U
Naphthalene	20U
Hexachlorobutadiene	20U
Hexachlorocyclopentadiene	20U
2-Chloronaphthalene	20U
Acenaphthylene	20U
Dimethyl Phthalate	20U
2,6-Dinitrotoluene	20U
Acenaphthene	20U
2,4-Dinitrotoluene	20U
4-Chlorophenyl Phenyl Ether	20U
Diethyl Phthalate	2.12J
Fluorene	20U
N-Nitrosodiphenyl Amine	20U
4-Bromophenyl Phenyl Ether	20U
Hexachlorobenzene	20U
Phenanthrene	20U
Anthracene	20U
Di-N-Butyl Phthalate	20U
Fluoranthene	20U
Pyrene	20U
Butyl Benzyl Phthalate	20U
Benzo(a) Anthracene	20U
3,3'-Dichlorobenzidine	20U
Chrysene	20U
Bis(2-Ethylhexyl) Phthalate	20U
Di-N-Octyl Phthalate	20U
Benzo(B) Fluoranthene	20U
Benzo(K) Fluoranthene	20U
Benzo(A) Pyrene	20U
Indeno(1,2,3-CD) Pyrene	20U
Dibenzo(A,H) Anthracene	20U
Benzo(G,H,I) Perylene	20U
Aniline	20U
Benzyl Alcohol	20U
4-Chloroaniline	20U

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HAZARDOUS SUBSTANCE LIST/ TARGET COMPOUND LIST
BASE/NEUTRAL EXTRACTABLE ORGANICS
MATRIX: AQUEOUS

CLIENT: HALEY & ALDRICH. INC. LAB ID : 93-07-0077-6
CLIENT PROJECT: 11135-40 NWS EARL ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW6 ANALYST: BP

COMPOUND	RESULTS (Ug/L)
Dibenzofuran	20U
2-Nitroaniline	100U
3-Nitroaniline	100U
4-Nitroaniline	100U
Benzoic acid	100U
2-methyl Naphthalene	20U

412-6
RH/rd
FORM 412 PART 2, REV 1.90

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HAZARDOUS SUBSTANCE LIST/TARGET COMPOUND LIST
ACID EXTRACTABLE ORGANICS
MATRIX:**AQUEOUS**

CLIENT: HALEY & ALDRICH, INC. LAB ID : 93-07-0077-6
CLIENT PROJECT:11135-40 NWS EARLE ANALYSIS DATE: 7/20/93
CLIENT SAMPLE ID: MW6 ANALYST: BP

COMPOUND	Results (ug/L)
Phenol	20U
2-Chlorophenol	20U
2-Nitrophenol	20U
2,4-Dimethylphenol	20U
2,4-Dichlorophenol	20U
4-Chloro-3-Methyl Phenol	20U
2,4,6-Trichlorophenol	20U
2,4-Dinitrophenol	100U
4-Nitrophenol	100U
4,6-Dinitro-2-Methylphenol	100U
Pentachlorophenol	100U
2,4,5-Trichlorophenol	20U
2-Methyl Phenol	20U
3+4-Methyl Phenol	20U

415-6
RH/rd

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TABULATED ANALYTICAL RESULTS

GC EXTRACTABLE ORGANICS

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ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE : 07/08/93

LAB ID:93-07-0077 -001
ANALYST JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW1

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
AROCLOR 1016	<1.00	1.00
AROCLOR 1221	<1.00	1.00
AROCLOR 1232	<1.00	1.00
AROCLOR 1242	<1.00	1.00
AROCLOR 1248	<1.00	1.00
AROCLOR 1254	<1.00	1.00
AROCLOR 1260	<1.00	1.00

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE : 07/08/93

LAB ID:93-07-0077 -002
ANALYST JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW2

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
AROCLOR 1016	<1.00	1.00
AROCLOR 1221	<1.00	1.00
AROCLOR 1232	<1.00	1.00
AROCLOR 1242	<1.00	1.00
AROCLOR 1248	<1.00	1.00
AROCLOR 1254	<1.00	1.00
AROCLOR 1260	<1.00	1.00

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE : 07/08/93

LAB ID:93-07-0077 -003
ANALYST JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW3

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
AROCLOR 1016	<1.00	1.00
AROCLOR 1221	<1.00	1.00
AROCLOR 1232	<1.00	1.00
AROCLOR 1242	<1.00	1.00
AROCLOR 1248	<1.00	1.00
AROCLOR 1254	<1.00	1.00
AROCLOR 1260	<1.00	1.00

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE : 07/08/93

LAB ID:93-07-0077 -004
ANALYST JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW4

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
AROCLOR 1016	<1.00	1.00
AROCLOR 1221	<1.00	1.00
AROCLOR 1232	<1.00	1.00
AROCLOR 1242	<1.00	1.00
AROCLOR 1248	<1.00	1.00
AROCLOR 1254	<1.00	1.00
AROCLOR 1260	<1.00	1.00

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE : 07/08/93

LAB ID:93-07-0077 -005
ANALYST JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW5

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
AROCLOR 1016	<1.00	1.00
AROCLOR 1221	<1.00	1.00
AROCLOR 1232	<1.00	1.00
AROCLOR 1242	<1.00	1.00
AROCLOR 1248	<1.00	1.00
AROCLOR 1254	<1.00	1.00
AROCLOR 1260	<1.00	1.00

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

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ANALYTICAL REPORT

PCB ANALYSIS BY GAS CHROMATOGRAPHY

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE : 07/08/93

LAB ID:93-07-0077 -006
ANALYST JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW6

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
AROCLOR 1016	<1.00	1.00
AROCLOR 1221	<1.00	1.00
AROCLOR 1232	<1.00	1.00
AROCLOR 1242	<1.00	1.00
AROCLOR 1248	<1.00	1.00
AROCLOR 1254	<1.00	1.00
AROCLOR 1260	<1.00	1.00

COMMENTS:

N.D. = NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL).
< = LESS THAN
RESULTS ARE REPORTED ON DRY WEIGHT BASIS.

PCB301S

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE: 07/08/93

LAB ID: 93-07-0077-001
ANALYST : JJ
ANALYSIS DATE: 7/14/93
MATRIX :WATER

CLIENT SAMPLE DESIGNATION: MW1

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
Aldrin	<0.10	0.10
BHC-alpha	<0.10	0.10
BHC-beta	<0.10	0.10
BHC-gamma (Lindane)	<0.10	0.10
BHC-delta	<0.10	0.10
alpha- Chlordane	<0.10	0.10
gamma- Chlordane	<0.10	0.10
pp'-DDD	<0.10	0.10
pp'-DDE	<0.10	0.10
pp'-DDT	<0.10	0.10
Dieldrin	<0.10	0.10
Endosulfan-alpha	<0.10	0.10
Endosulfan-beta	<0.10	0.10
Endosulfan Sulfate	<0.10	0.10
Endrin	<0.10	0.10
Endrin Aldehyde	<0.10	0.10
Endrin Ketone	<0.10	0.10
Heptachlor	<0.10	0.10
Heptachlor Epoxide	<0.10	0.10
Methoxychlor	<0.10	0.10
Toxaphene	<1.00	1.00

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

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ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE: 07/08/93

LAB ID: 93-07-0077-002
ANALYST : JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW2

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
Aldrin	<0.10	0.10
BHC-alpha	<0.10	0.10
BHC-beta	<0.10	0.10
BHC-gamma (Lindane)	<0.10	0.10
BHC-delta	<0.10	0.10
alpha- Chlordane	<0.10	0.10
gamma- Chlordane	<0.10	0.10
pp'-DDD	<0.10	0.10
pp'-DDE	<0.10	0.10
pp'-DDT	<0.10	0.10
Dieldrin	<0.10	0.10
Endosulfan-alpha	<0.10	0.10
Endosulfan-beta	<0.10	0.10
Endosulfan Sulfate	<0.10	0.10
Endrin	<0.10	0.10
Endrin Aldehyde	<0.10	0.10
Endrin Ketone	<0.10	0.10
Heptachlor	<0.10	0.10
Heptachlor Epoxide	<0.10	0.10
Methoxychlor	<0.10	0.10
Toxaphene	<1.00	1.00

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

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ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE: 07/08/93

LAB ID: 93-07-0077-003
ANALYST : JJ
ANALYSIS DATE: 7/14/93
MATRIX :WATER

CLIENT SAMPLE DESIGNATION: MW3

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
Aldrin	<0.10	0.10
BHC-alpha	<0.10	0.10
BHC-beta	<0.10	0.10
BHC-gamma (Lindane)	<0.10	0.10
BHC-delta	<0.10	0.10
alpha- Chlordane	<0.10	0.10
gamma- Chlordane	<0.10	0.10
pp'-DDD	<0.10	0.10
pp'-DDE	<0.10	0.10
pp'-DDT	<0.10	0.10
Dieldrin	<0.10	0.10
Endosulfan-alpha	<0.10	0.10
Endosulfan-beta	<0.10	0.10
Endosulfan Sulfate	<0.10	0.10
Endrin	<0.10	0.10
Endrin Aldehyde	<0.10	0.10
Endrin Ketone	<0.10	0.10
Heptachlor	<0.10	0.10
Heptachlor Epoxide	<0.10	0.10
Methoxychlor	<0.10	0.10
Toxaphene	<1.00	1.00

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

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ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE: 07/08/93

LAB ID: 93-07-0077-004
ANALYST : JJ
ANALYSIS DATE: 7/14/93
MATRIX :WATER

CLIENT SAMPLE DESIGNATION: MW4

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
Aldrin	<0.10	0.10
BHC-alpha	<0.10	0.10
BHC-beta	<0.10	0.10
BHC-gamma (Lindane)	<0.10	0.10
BHC-delta	<0.10	0.10
alpha- Chlordane	<0.10	0.10
gamma- Chlordane	<0.10	0.10
pp'-DDD	<0.10	0.10
pp'-DDE	<0.10	0.10
pp'-DDT	<0.10	0.10
Dieldrin	<0.10	0.10
Endosulfan-alpha	<0.10	0.10
Endosulfan-beta	<0.10	0.10
Endosulfan Sulfate	<0.10	0.10
Endrin	<0.10	0.10
Endrin Aldehyde	<0.10	0.10
Endrin Ketone	<0.10	0.10
Heptachlor	<0.10	0.10
Heptachlor Epoxide	<0.10	0.10
Methoxychlor	<0.10	0.10
Toxaphene	<1.00	1.00

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

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ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE: 07/08/93

LAB ID: 93-07-0077-005
ANALYST : JJ
ANALYSIS DATE:7/14/93
MATRIX :WATER

CLIENT SAMPLE DESIGNATION: MW5

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
Aldrin	<0.10	0.10
BHC-alpha	<0.10	0.10
BHC-beta	<0.10	0.10
BHC-gamma (Lindane)	<0.10	0.10
BHC-delta	<0.10	0.10
alpha- Chlordane	<0.10	0.10
gamma- Chlordane	<0.10	0.10
pp'-DDD	<0.10	0.10
pp'-DDE	<0.10	0.10
pp'-DDT	<0.10	0.10
Dieldrin	<0.10	0.10
Endosulfan-alpha	<0.10	0.10
Endosulfan-beta	<0.10	0.10
Endosulfan Sulfate	<0.10	0.10
Endrin	<0.10	0.10
Endrin Aldehyde	<0.10	0.10
Endrin Ketone	<0.10	0.10
Heptachlor	<0.10	0.10
Heptachlor Epoxide	<0.10	0.10
Methoxychlor	<0.10	0.10
Toxaphene	<1.00	1.00

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4112

ANALYTICAL REPORT

TCL PESTICIDES BY GAS CHROMATOGRAPHY SW846 8080

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
REPORT DATE : AUG. 2 1993
PROJECT RECEIPT DATE: 07/08/93

LAB ID: 93-07-0077-006
ANALYST : JJ
ANALYSIS DATE: 7/14/93
MATRIX : WATER

CLIENT SAMPLE DESIGNATION: MW6

COMPOUND	RESULTS(UG/L)	MDL(UG/L)
Aldrin	<0.10	0.10
BHC-alpha	<0.10	0.10
BHC-beta	<0.10	0.10
BHC-gamma (Lindane)	<0.10	0.10
BHC-delta	<0.10	0.10
alpha- Chlordane	<0.10	0.10
gamma- Chlordane	<0.10	0.10
pp'-DDD	<0.10	0.10
pp'-DDE	<0.10	0.10
pp'-DDT	<0.10	0.10
Dieldrin	<0.10	0.10
Endosulfan-alpha	<0.10	0.10
Endosulfan-beta	<0.10	0.10
Endosulfan Sulfate	<0.10	0.10
Endrin	<0.10	0.10
Endrin Aldehyde	<0.10	0.10
Endrin Ketone	<0.10	0.10
Heptachlor	<0.10	0.10
Heptachlor Epoxide	<0.10	0.10
Methoxychlor	<0.10	0.10
Toxaphene	<1.00	1.00

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
< = LESS THAN

PESTHSL

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TABULATED ANALYTICAL RESULTS

METALS ANALYSIS

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
CLIENT ID: MW1
REPORT DATE: JULY 21 1993

LAB ID: 93-07-0077-001
ANALYST: RS/JD/DR
ANALYSIS DATE: 7/12-16/93

PARAMETER	RESULTS (ug/l)	MDL (ug/l)
Antimony	<10.0	10.0
Arsenic	<10.0	10.0
Beryllium	<100.0	100.0
Cadmium	<5.0	5.0
Chromium	323.0	10.0
Copper	50.0	50.0
Lead	110.0	10.0
Mercury	<0.50	0.5
Nickel	<100.0	100
Selenium	<10.0	10.0
Silver	<50.0	50.0
Thallium	<10.0	10.0
Zinc	380.0	50.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
IND = INDETERMINANT
< = LESS THAN
S = RESULTS BY METHOD OF ADDITION PROCEDURE
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME201

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax (908) 225-4110

ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
CLIENT ID: MW2
REPORT DATE: JULY 21 1993

LAB ID: 93-07-0077-002
ANALYST: RS/JD/DR
ANALYSIS DATE: 7/12-16/93

PARAMETER	RESULTS (ug/l)	MDL (ug/l)
Antimony	<10.0	10.0
Arsenic	<10.0	10.0
Beryllium	<100.0	100.0
Cadmium	<5.0	5.0
Chromium	94.4	10.0
Copper	<50.0	50.0
Lead	17.3	10.0
Mercury	<0.50	0.5
Nickel	<100.0	100
Selenium	<10.0	10.0
Silver	<50.0	50.0
Thallium	<10.0	10.0
Zinc	200.0	50.0

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
IND = INDETERMINANT
< = LESS THAN
S = RESULTS BY METHOD OF ADDITION PROCEDURE
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
CLIENT ID: MW3
REPORT DATE: JULY 21 1993

LAB ID: 93-07-0077-003
ANALYST: RS/JD/DR
ANALYSIS DATE: 7/12-16/93

PARAMETER	RESULTS (ug/l)	MDL (ug/l)
Antimony	<10.0	10.0
Arsenic	<10.0	10.0
Beryllium	<100.0	100.0
Cadmium	<5.0	5.0
Chromium	229.0	10.0
Copper	<50.0	50.0
Lead	54.4	10.0
Mercury	<0.50	0.5
Nickel	<100.0	100
Selenium	<10.0	10.0
Silver	<50.0	50.0
Thallium	<10.0	10.0
Zinc	280.0	50.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
IND = INDETERMINANT
< = LESS THAN
S = RESULTS BY METHOD OF ADDITION PROCEDURE
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
CLIENT ID: MW4
REPORT DATE: JULY 21 1993

LAB ID: 93-07-0077-004
ANALYST: RS/JD/DR
ANALYSIS DATE: 7/12-16/93

PARAMETER	RESULTS (ug/l)	MDL (ug/l)
Antimony	<10.0	10.0
Arsenic	<10.0	10.0
Beryllium	<100.0	100.0
Cadmium	<5.0	5.0
Chromium	152.0	10.0
Copper	<50.0	50.0
Lead	43.3	10.0
Mercury	0.6	0.5
Nickel	<100.0	100
Selenium	<10.0	10.0
Silver	<50.0	50.0
Thallium	<10.0	10.0
Zinc	270.0	50.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
IND = INDETERMINANT
< = LESS THAN
S = RESULTS BY METHOD OF ADDITION PROCEDURE
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
CLIENT ID: MW5
REPORT DATE: JULY 21 1993

LAB ID: 93-07-0077-005
ANALYST: RS/JD/DR
ANALYSIS DATE: 7/12-16/93

PARAMETER	RESULTS (ug/l)	MDL (ug/l)
Antimony	<10.0	10.0
Arsenic	<10.0	10.0
Beryllium	<100.0	100.0
Cadmium	<5.0	5.0
Chromium	196.0	10.0
Copper	<50.0	50.0
Lead	26.4	10.0
Mercury	<0.50	0.5
Nickel	<100.0	100
Selenium	<10.0	10.0
Silver	<50.0	50.0
Thallium	<10.0	10.0
Zinc	330.0	50.0

COMMENTS:
MDL = METHOD DETECTION LIMIT (MDL).
IND = INDETERMINANT
< = LESS THAN
S = RESULTS BY METHOD OF ADDITION PROCEDURE
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

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ANALYTICAL REPORT

PRIORITY POLLUTANT METALS

CLIENT: HALEY & ALDRICH, INC.
CLIENT PROJECT: 11135-40 NWS EARLE
CLIENT ID: MW6
REPORT DATE: JULY 21 1993

LAB ID: 93-07-0077-006
ANALYST: RS/JD/DR
ANALYSIS DATE: 7/12-16/93

PARAMETER	RESULTS (ug/l)	MDL (ug/l)
Antimony	<10.0	10.0
Arsenic	<10.0	10.0
Beryllium	<100.0	100.0
Cadmium	<5.0	5.0
Chromium	197.0	10.0
Copper	<50.0	50.0
Lead	31.0	10.0
Mercury	<0.50	0.5
Nickel	<100.0	100
Selenium	<10.0	10.0
Silver	<50.0	50.0
Thallium	<10.0	10.0
Zinc	250.0	50.0

COMMENTS:

MDL = METHOD DETECTION LIMIT (MDL).
IND = INDETERMINANT
< = LESS THAN
S = RESULTS BY METHOD OF ADDITION PROCEDURE
+ = CORRELATION COEFFICIENT FOR METHOD OF ADDITION IS LESS THAN 0.995 AFTER REPEATED ONCE.

ME201

ANALAB INC.

205 Campus Plaza 1, Raritan Center, Edison, New Jersey 08837 (908) 225-4111
ENVIRONMENTAL ANALYTICAL LABORATORY SERVICES FAX (908) 225-4110

CHAIN-OF-CUSTODY RECORD and Work Authorization

LAB SDG NO.: (FOR LAB USE ONLY) 93-07-0013

Company: HALEY & ALDRICH, INC.
Address: 58 CHARLES STREET
City: CAMBRIDGE
State: MA. ZIP: 02138 Phone: 617-494-4910
Project Manager: VERONICA O'DONNELL x-738
Project name: Purchase Order No.:

ANALYSIS REQUESTED

PRINT ANALYSIS; REQUESTS CLEARLY, LEGIBLY AND COMPLETELY.

Page 1 of 1

	SAMPLE DESCRIPTION	TYPE GRB	TYPE COMP	MATRIX TYPE	DATE SAMPLED	TIME	PRES	NO. CONT	BNA	P.P. METALS	PEST/PCB	VOA + 10	REMARKS
1	MW1 S2 4'-6'	✓		SISA	15JUL93	09:40			X	X	X	X	1-16, 2 VOA
2	MW1 S3 6'-8'	✓		SISA	15JUL93	09:55			X	X	X	X	1-16, 2-VOA
3	MW1 S4 8'-10'	✓		SISA	15JUL93	10:10			X	X	X	X	1-16, 2-VOA
4	MW2 S4 7'-9'	✓		SISA	15JUL93	14:15			X	X	X	X	1-16, 2-VOA
5	MW2 S5 9'-11'	✓		SA	15JUL93	14:40			X	X	X	4	1-16, 2-VOA

FAILURE TO PRINT CLEARLY, LEGIBLY AND COMPLETELY MAY RESULT IN DELAYS. ANY ANALYSIS REQUEST NOT ENTERED COMPLETELY, CLEARLY AND LEGIBLY OR WHICH IS CONFUSING OR AMBIGUOUS MAY RESULT IN DELAYS. SAMPLES CAN NOT BE LOGGED IN AND THE TURNAROUND TIME CLOCK WILL NOT START UNTIL ANY AMBIGUITIES ARE RESOLVED. TO AVOID THIS, PRINT CLEARLY, LEGIBLY AND COMPLETELY.

SAMPLER/SUBMITTER'S STATEMENT: I attest that the proper field sampling procedures were used during the collection: Name (print): [illegible] Signature: [illegible]
of these samples and that the information on this Chain of Custody and the analysis(es) requested are true and correct.

RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	REASON:

RELINQUISHED TO LABORATORY BY:	ACCEPTED FOR LAB BY	DATE	TIME
[illegible]	[illegible]	7/1/93	3:10

REMARKS: RUSH TURN AROUND

LABORATORY COMMENTS: (Lab Use Only)

NEED FAXABLE RESULTS ON 7-13-93

DATA DELIVERABLES

☐ Tier I ☐ Tier II ☐ Results Only

☐ ECRA ☒ Other: RTD 4

STANDARD TURNAROUND TIME ☐ (2-3 Weeks)

PRIORITY TURNAROUND TIME AUTHORIZATION

Before submitting samples for expidited T.A.T. you must have requested in advance and received a coded T.A.T. AUTHORIZATION NUMBER from the office of V.P. of Lab Op rations.

AUTHORIZATION NO.: 062893-1
T.A.T. AUTHORIZED: 12 DAYS

SPECIAL HANDLING: Contact Person: Phone:
FAX: Other:

For Lab Use Only

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Form 0401 Rev. 7/91

ANALAB INC.

205 Campus Plaza 1, Raritan Center, Edison, New Jersey 08837 (908) 225-4111
ENVIRONMENTAL ANALYTICAL LABORATORY SERVICES FAX (908) 225-4110

CHAIN-OF-CUSTODY RECORD and Work Authorization

LAB SDG NO.: (FOR LAB USE ONLY) 93-06-375

Company	HALEY & ALDRICH, INC.
Address	58 CHARLES STREET
City	CAMBRIDGE
State	MA. ZIP 02138 Phone 617-494-4910
Project Manager	Veronica O'Donnell x 738
Project name	Hazmat Storage Facility Purchase Order No.

ANALYSIS REQUESTED: BNA, PP METALS, PEST/PCB, VOA + 10

PRINT ANALYSIS; REQUESTS CLEARLY, LEGIBLY AND COMPLETELY.

Page 1 of 1

	SAMPLE DESCRIPTION	TYPE GRB	TYPE COMP	MATRIX TYPE	DATE SAMPLED	TIME	PRES	NO. CONT	BNA	PP METALS	PEST/PCB	VOA + 10	REMARKS
	NWS Earle, Colts Neck NJ												
1	MW4 S2 2'-4'	✓		SA	30 JUN	09:40			X	X	X	X	1 16 oz, 2 VOAS
2	MW4 S5 8'-10'	✓		SA	"	09:50			X	X	X	X	" "
3	MW3 S3 4'-6'	✓		SA	"	14:05			X	X	X	X	" "
4	MW3 S5 8'-10'	✓		SA	"	14:15			X	X	X	X	" "

FAILURE TO PRINT CLEARLY, LEGIBLY AND COMPLETELY MAY RESULT IN DELAYS. ANY ANALYSIS REQUEST NOT ENTERED COMPLETELY, CLEARLY AND LEGIBLY OR WHICH IS CONFUSING OR AMBIGUOUS MAY RESULT IN DELAYS. SAMPLES CAN NOT BE LOGGED IN AND THE TURNAROUND TIME CLOCK WILL NOT START UNTIL ANY AMBIGUITIES ARE RESOLVED. TO AVOID THIS, PRINT CLEARLY, LEGIBLY AND COMPLETELY.

SAMPLER/SUBMITTER'S STATEMENT: I attest that the proper field sampling procedures were used during the collection of these samples and that the information on this Chain of Custody and the analysis(es) requested are true and correct. Name (print): Chip Osgood Signature:

RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	REASON:

RELINQUISHED TO LABORATORY BY:	ACCEPTED FOR LAB BY	DATE	TIME
		6/30/93	3:00

REMARKS: RUSH TURNAROUND

LABORATORY COMMENTS: (Lab Use Only)

All Samples Received Cool Intact and Properly Preserved

NEED FAXABLE RESULTS ON 7-12-93

DATA DELIVERABLES

☐ Tier I ☐ Tier II ☐ Results Only

☐ ECRA ☒ Other: RTD-4

STANDARD TURNAROUND TIME ☐ (2-3 Weeks)

PRIORITY TURNAROUND TIME AUTHORIZATION

Before submitting samples for expidited T.A.T. you must have requested in advance and received a coded T.A.T. AUTHORIZATION NUMBER from the office of V.P. of Lab Operations.

AUTHORIZATION NO.: 062893-1

T.A.T. AUTHORIZED: 12 DAYS

SPECIAL HANDLING: Contact Person: Phone:

FAX: Other:

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ANALab inc.

205 Campus Plaza 1, Raritan Center, Edison, New Jersey 08837 (908) 225-4111
ENVIRONMENTAL ANALYTICAL LABORATORY SERVICES FAX (908) 225-4110

CHAIN-OF-CUSTODY RECORD and Work Authorization

LAB SDG NO.: (FOR LAB USE ONLY) 93-06-362 2

Company: HALEY & ALDRICH, INC. FILE 11135-40
Address: 58 CHARLES STREET
City: CAMBRIDGE
State: MA. ZIP: 02138 Phone: 617-494-4910
Project Manager: Veronica O'Donnell * 738
Project name: Hazmat Storage Fac. Purchase Order No.

ANALYSIS REQUESTED: BNA, PP METALS, PEST/PCB, VOA

PRINT ANALYSIS REQUESTS CLEARLY, LEGIBLY AND COMPLETELY.

Page 1 of 1

	SAMPLE DESCRIPTION (NWS Earle, Colts Neck NJ)	TYPE GRB	TYPE COMP	MATRIX TYPE	DATE SAMPLED	TIME	PRES	NO. CONT	BNA	PP METALS	PEST/PCB	VOA	REMARKS
1	MW6 S2 2'-4'	✓		SA	29 JUN	09:30			X	X	X	X	1-16 oz JAR
2	MW6 S4 6'-8'	✓		SA	"	09:45			X	X	X	X	"
3	MW5 S3 6'-8'	✓		SVCL	"	14:10			X	X	X	X	"
4	MW5 S4 8'-10'	✓		SA	"	14:20			X	X	X	X	"

FAILURE TO PRINT CLEARLY, LEGIBLY AND COMPLETELY MAY RESULT IN DELAYS. ANY ANALYSIS REQUEST NOT ENTERED COMPLETELY, CLEARLY AND LEGIBLY OR WHICH IS CONFUSING OR AMBIGUOUS MAY RESULT IN DELAYS. SAMPLES CAN NOT BE LOGGED IN AND THE TURNAROUND TIME CLOCK WILL NOT START UNTIL ANY AMBIGUITIES ARE RESOLVED. TO AVOID THIS, PRINT CLEARLY, LEGIBLY AND COMPLETELY.

SAMPLER/SUBMITTER'S STATEMENT: I attest that the proper field sampling procedures were used during the collection of these samples and that the information on this Chain of Custody and the analysis(es) requested are true and correct. Name (print): Charley Osgood Signature:

RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	REASON:

RELINQUISHED TO LABORATORY BY:	ACCEPTED FOR LAB BY:	DATE	TIME
		6/30/93	3:00

REMARKS: RUSH TURNAROUND

LABORATORY COMMENTS: (Lab Use Only)

All Samples Received Cool Intact and Properly Preserved

NEED FAXABLE RESULTS ON 7-12-93

DATA DELIVERABLES

☐ Tier I ☐ Tier II ☐ Results Only

☐ ECRA ☐ Other:

STANDARD TURNAROUND TIME ☐ (2-3 Weeks)

PRIORITY TURNAROUND TIME AUTHORIZATION

Before submitting samples for expidited T.A.T. you must have requested in advance and received a coded T.A.T. AUTHORIZATION NUMBER from the office of V.P. of Lab Operations.

AUTHORIZATION NO.: 062893-1
T.A.T. AUTHORIZED: 12 DAYS

SPECIAL HANDLING: Contact Person: Phone:
FAX: Other:

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