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FINAL

RAC REQUIREMENTS PACKAGE REMOVAL OF DRUMS AT SITE 6

MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

CONTRACT TASK ORDER 0197

Prepared For:

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES
ENGINEERING COMMAND
Norfolk, Virginia

Under:

LANTDIV CLEAN Program
Contract N62470-89-D-4814

Prepared By:

BAKER ENVIRONMENTAL, INC.
Coraopolis, Pennsylvania

AUGUST 11, 1993

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BASIS OF DESIGN
REMOVAL ACTION
MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

INTRODUCTION

The primary objective of this project is to remove, transport, and dispose of all drums, storage tanks, and containers located at Site 6, Operable Unit No. 2 (OU No. 2). The scope of this project includes the removal, transportation and disposal of all surficial and buried drums, storage tanks, containers, their associated contents, and any impacted soils. These drums, storage tanks, and containers are suspected to be either sources or potential sources of contamination.

The following sections of this basis of design describe the removal action by hazardous, toxic, and radiological waste account, as defined by the Remedial Action Delivery Order Requirements Package Guide, NEESA 20.2-062 of June 1992.

BACKGROUND

Marine Corps Base (MCB), Camp Lejeune, North Carolina was placed on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL) that became effective on October 4, 1989 (54 Federal Register 41015, October 4, 1989). The United States Environmental Protection Agency (USEPA) Region IV, the North Carolina Department of Environment, Health and Natural Resources (NC DEHNR) and the United States Department of the Navy (DoN) then entered into a Federal Facilities Agreement (FFA) for Marine Corps Base, Camp Lejeune. The primary purpose of the FFA was to ensure that environmental impacts associated with past and present activities at the Marine Corps Base were thoroughly investigated and appropriate CERCLA response/ Resource Conservation and Recovery Act (RCRA) corrective action alternatives were developed and implemented as necessary to protect public health and the environment.

OU No. 2 is located approximately 1.75 miles east of the New River and 2 miles south of State Route 24 on the mainside portion of MCB Camp Lejeune. The unit is bordered by Holcomb Boulevard on the west, Sneads Ferry Road on the south, Piney Green Road on the east, and by Wallace Creek on the north. Camp Lejeune Railroad operates rail lines parallel to Holcomb

Boulevard bordering OU No. 2 on the west. OU No. 2 covers an area of approximately 210 acres. OU No. 2 consists of three sites: Sites 6, 9, and 82.

Site 6 is bounded on the north by Site 82, by Piney Green Road on the east, by Site 9 on the south, and by Holcomb Boulevard on the west. Site 6 covers an area of approximately 177 acres that incorporates Storage Lots 201 and 203, the wooded area between the storage lots, and a ravine, which begins at Site 6 and bisects Site 82. Three surface water bodies are associated with Site 6: Wallace Creek, Bear Head Creek, and a ravine located in the wooded area north of Lot 203 that drains to Wallace Creek.

Open Storage Lot 201 (Lot 201) is a fenced lot located in the south-central portion of Site 6. It is a flat area with sparse vegetation around the fence lines. Open Storage Lot 203 (Lot 203) is a fenced lot located in the northern portion of Site 6 covering approximately 46 acres. Lot 203 is a relatively flat area with elevation differences of approximately five feet. The ground surface is comprised of both naturally existing soil and fill material. Lot 203 is bordered by Site 82, Piney Green Road to the east, woods to the south, and by Holcomb Boulevard to the west. Lot 203 is currently inactive.

Approximately 200 drums and containers are present at Site 6. The majority of the drums, if labeled, were identified as containing lubricants, petroleum products, or corrosives. Empty storage tanks are also located at Site 6. They were labeled as containing diesel fuel, gasoline, and kerosene (Baker, 1992).

Woods and open fields surround both Storage Lots 201 and 203 and make up the remaining area of Site 6. The topography of the wooded areas is relatively flat, but localized trenching and mounding is visible just north of Lot 203 and west of Piney Green Road. The wooded areas are randomly littered with debris including spent ammunition casings, and empty or rusted drums. Markings were observed on a few drums (most drums did not contain marking due to their condition and age) located north of Lot 203. These drums were marked as "lubrication oils." Many of the drums observed were only shells or fragments of drums (Baker, 1992).

Site 6 has a long history of various uses including the disposal and storage of wastes and supplies. Lot 203 has been used as a disposal area since the 1940s. There is little documentation on the disposal activities at this lot. Lot 203 in not currently active as a storage or disposal area, but the ground surface is littered with various debris. Lot 203 was also used for the storage and disposal of radio and communication parts, shredded tires,

lubricants, petroleum products, corrosives, expended demolition kit training materials, ordnance, sheet metal debris, wire cables, and wooded pallets.

Lot 203 is currently fenced. From historical photographs, it appears that the fenced boundaries have changed since the lot was in operation.

1.0 MOBILIZATION AND PREPARATORY WORK

Mobilization involves the acquisition, delivery, and setup of equipment, material, and personnel to the work site that are necessary to accomplish the Removal Action scope of work.

2.0 MONITORING, SAMPLING, TESTING, AND ANALYSIS

The Contractor shall submit both a site sampling and analysis plan (SAP) and a work plan describing the Contractor's sampling, analytical, and quality control procedures for the performance of work required under these specifications. The work plan shall include a summary of work to be performed, an Environmental Protection Plan, a Chemical Quality Management Plan (CQMP), the project organization, and any required catalog data. The CQMP shall ensure that all chemical data generated are scientifically accurate and legally defensible. The SAP shall detail sample quantities, acquisition procedures and data collection methods to be employed during the removal action. The type and quantity of testing shall be based on the requirements set forth in the specifications and both the Contractor's health and safety plan (HASP) and air monitoring plan. Additional monitoring, sampling, testing and analyses shall be carried out as required during the project with the approval of the Navy's Technical Representative.

The Contractor shall also submit documentation that certifies testing laboratory qualifications. The testing laboratory must meet the requirements set forth in the Basic Contract and be NEESA certified.

The Contractor shall adhere to all EPA chain-of-custody procedures during the collection, transport, and analyses of all samples. The Contractor will arrange laboratory analyses of all samples to conform with NEESA Level C Quality Assurance Requirements.

3.0 SITE WORK

Site work includes all clearing and grubbing, fencing, roadway and equipment staging area preparation. Clearing and grubbing will be limited to approximately 1.0 acre of the excavation areas. Trees greater than 3 inches in diameter will be cut and stored in the wooded areas.

The excavation access road and equipment staging areas, noted on site plan drawings, shall be covered with crushed gravel.

Fencing construction will include the installation of chain link, silt, and safety fencing.

4.0 (NOT USED)

The current HTRW Work Breakdown Structure has not assigned an account to Section 4.0.

5.0 SURFACE WATER COLLECTION AND CONTROL

No surface water collection and control is anticipated for this project.

6.0 GROUNDWATER COLLECTION AND CONTROL

No groundwater collection and control is anticipated for this project.

7.0 AIR POLLUTION COLLECTION AND CONTROL

Investigations to date have detected evidence of volatile contamination in the northern proposed excavation areas. Therefore, the excavation, transportation, and backfilling activities shall include PID monitoring. Soil, haul roads, and other areas disturbed by operations will be treated with water as a dust suppressant.

8.0 SOLIDS COLLECTION AND CONTAINMENT

The excavation of buried drums and associated contaminated soil will be performed with ordinary earth moving equipment, such as excavators and front-end loaders. Excavation will proceed in such a way as to allow segregation of contaminated and non-contaminated soil.

The areas of contamination to be excavated are primarily based on the results of an aerial photographic investigation conducted by the USEPA's Environmental Photographic Interpretation Center and a remedial investigation completed in March 1993 by Baker Environmental, Inc. The estimated in-place volume of drum-containing trenches is 310 cubic yards, based on 141 linear feet of 10' x 5', 6' or 8' trench, as indicated on the drawings.

Once the Contractor has excavated the specified limits of the trenches, an on-site analysis consisting of a visual inspection will be performed on the surrounding soil. If the visual inspection reveals evidence of additional drums or visually contaminated soil, the Contractor will consult with the Navy's Technical Representative to determine an additional amount of excavation.

The Contractor shall provide a bermed and lined soil containment area, as specified in Section 02220 of the Guideline Technical Specifications. Visually contaminated soil shall be stockpiled separately. Non-contaminated soil shall be stored temporarily, analyzed, certified to be free from contaminants, retrieved, and placed in the trench for use as backfill.

General construction debris encountered in the excavation areas shall be stockpiled for disposal at a North Carolina approved landfill.

9.0 LIQUID, SEDIMENT, AND SLUDGE COLLECTION AND CONTAINMENT

The Contractor shall provide a decontamination pad to collect liquids from the decontamination of personnel and equipment. A separate area designated for the rinsing and decontamination of drums, storage tanks and containers will be provided within the drum containment area. The resulting fluids will be collected in a tank for analysis and proper disposal or treatment.

10.0 DRUMS, TANKS, AND MISCELLANEOUS DEMOLITION AND DISPOSAL

Drum, storage tank, miscellaneous container and associated contaminated soil removal are the only types of removal expected. Above ground storage tanks are to be emptied, removed, cleaned, and decommissioned for scrap. Drums are to be emptied, rinsed, crushed and staged for scrap.

11.0 BIOLOGICAL TREATMENT

No biological treatment is anticipated for this project.

12.0 CHEMICAL TREATMENT

No chemical treatment is anticipated for this project.

13.0 PHYSICAL TREATMENT

No physical treatment is anticipated for this project.

14.0 THERMAL TREATMENT

No thermal treatment is anticipated for this project.

15.0 STABILIZATION, FIXATION, AND ENCAPSULATION

Contaminated soil and debris to be disposed must not contain any free liquids. The Contractor may be required to dry the soil by adding a drying agent such as kiln dust to the excavated material.

16.0 (NOT USED)

The current HRTW Work Breakdown has not assigned an account to Section 16.0.

17.0 DECONTAMINATION AND DECOMMISSIONING

Decontamination and decommissioning are not applicable to this removal action.

18.0 DISPOSAL (OTHER THAN COMMERCIAL)

Non-commercial disposal is not anticipated for this project.

19.0 DISPOSAL (COMMERCIAL)

Contaminated soil will be loaded onto trucks or roll-off containers. The loaded waste will be manifested by a licensed hazardous waste hauler and transported to an approved solid waste landfill, or RCRA Subtitle C hazardous waste landfill if necessary.

Liquids generated through decontamination of drums, storage tanks, and containers shall be containerized, manifested, and transported to an approved treatment facility. Liquids drawn from drum, storage tanks, and containers not previously tested shall be hazard categorized and compatibility tested. Lab analyses shall dictate the necessary method of treatment or disposal. The resulting waste streams shall be manifested and sent to an appropriate disposal or treatment facility.

20.0 SITE RESTORATION

The excavated areas will be backfilled with non-contaminated material from the project site or clean material brought from the borrow area at Camp Lejeune and regraded to the original contours. All excavated areas will be revegetated.

21.0 DEMOBILIZATION

All temporary facilities, equipment, and supplies acquired for this contract will be removed from Navy property.

Submittals shall include: (1) a punch list showing correction of all listed items; (2) a letter from the Contractor certifying completion of all contracted work in accordance with the contract conditions, applicable regulations, and standards of practice; (3) a completed project current condition with an as-built survey for the entire site; (4) submittal, in one collated document, of all quality control daily reports, samples, results of the analysis of the samples, corrective actions (if required, taken to correct unacceptable deviations from required quality standards), results of corrective actions; problems encountered and resolved, and lessons learned; and, (5) submittal in one collated document of all quality assurance samples, results of analysis of the samples, and corrective actions (if required, taken to correct unacceptable deviations from required quality standards).

The Contractor shall submit a detailed report summarizing the removal action, lessons learned, and recommendations for inclusion in future similar contracts.

DEPARTMENT OF THE NAVY

ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND

NAVAL STATION, NORFOLK, VIRGINIA

NEESA RAC Contract No.
N47408-92-D-3042

N62470-93-B-3801
NAVFAC Specification No. 05-93-3801

Appropriation: DERA

TIME CRITICAL REMOVAL ACTION, SITE 6, OPERABLE UNIT NO. 2 AT THE MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

Design by:

BAKER ENVIRONMENTAL, INC.
AIRPORT OFFICE PARK, BUILDING 3
420 ROUSER ROAD
CORAOPOLIS, PENNSYLVANIA 15108

Specification Prepared by:

BAKER ENVIRONMENTAL, INC.

Specification Approved by:

Specification Branch Head: _____
M. D. Mutter, P.E.

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W. H. Crone, P.E.

Environmental Quality Division Director: _____
W. H. Russell, P.E.

Date: _____

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SECTION 01010

GENERAL PARAGRAPHS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CORPS OF ENGINEERS (COE)

COE Engineering Manual EM-385-1-1

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.212-3 and 52.228-5

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 241	1989 Safeguarding Construction, Alteration, and Demolition Operations

1.2 ARARs

An ARAR, as defined, is an environmental law, regulation, or guideline that is either "applicable" or "relevant and appropriate" to a remedial action. "Applicable" requirements are those cleanup standards, standards of control, and other environmental protection requirements, criteria, or limitations, promulgated under Federal or State laws that specifically address chemicals/contaminants of concerns, remedial actions, locations of remediation, or other circumstances at a CERCLA-regulated site. "Relevant and appropriate" requirements are those which address problems or situations sufficiently similar to those encountered at a CERCLA-regulated site that their use is well suited to the particular site (Section 121 of CERCLA, 42 U.S.C. Section 9621 and 40 CFR Section 300.68(i)). The Navy intends to comply with CERCLA standards, and the following regulations shall be considered as ARARs for the site.

AMERICAN PETROLEUM INSTITUTE (API)

API 1604	API Recommended Practice, December 1984
API 2015	Cleaning Petroleum Storage Tanks, September 1985

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION LIABILITY ACT (CERCLA)

CERCLA Part 121 (d)(3)	Regulates waste disposal practices

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR, Parts 1904,1910,1926	Occupational Safety and Health Act Regulation
40 CFR, Part 50.6	National Ambient Air Quality Standards
40 CFR, Parts 260 to 280	
49 CFR, Parts 100 to 180	
49 CFR, Parts 387-397	Minimum financial responsibility for motor carriers and transportation of hazardous materials

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA)

EPA/540/P-91/008	Compendium of ERT Waste Sampling Procedures, Office of Emergency and Remedial Response, Washington, D.C., 1991

1.3 SUBMITTALS

Submit the following in accordance with Section C of the Basic Contract. Copies of submittals shall be submitted to distribution as indicated.

1.3.1 SD-18, Administrative or Close-out Submittals

a. As-Built Records

b. Site Health and Safety Plan

c. Sampling and Analysis Plan

d. Construction Schedule

e. Work Plan

f. Status Reports

g. CQC Plan Addenda

h. Testing Laboratory Qualifications

i. Test Results Summary Report

j. Daily Report to Inspector

k. Submittal Status Log

l. Permits

m. Contractor's Closeout Report

1.4 GENERAL INTENTION

It is the declared and acknowledged intention and meaning to provide and secure a removal action at Marine Corps Base Camp Lejeune, Site 6, North Carolina, complete and ready for use.

1.5 GENERAL DESCRIPTION

This work includes providing all labor, supervision, tools, materials, equipment and transportation necessary to remove and dispose of drums, containers, above ground storage tanks, and the associated contaminated soils at Site 6, MCB Camp Lejeune. Components of this project include: removal and excavation of drums, containers and soil located on the surface or partially buried at Site 6 in and around Storage Lot 203 and south of Storage Lot 201; backfilling with clean fill; control, collection and disposal of contaminated water and investigation derived wastes (IDW) liquids; transportation and disposal of contaminated material classified as a hazardous waste under RCRA (40 CFR Part 261) in a RCRA Subtitle C landfill; disposal of non-hazardous wastes in an approved solid waste landfill; site restoration; and other related work.

1.6 DESCRIPTION OF CONTAMINANTS PRESENT

Lead and barium were found in test pits GS1960D. A viscous sludge from containers in test pits 6-TP5 and 6-TP6 closely resembled No. 6 fuel oil. Contents from 48 drums/containers were sampled and composited. The results of this sampling event are found at the end of this section of specifications.

1.7 LOCATION

The work shall be located at Site 6 of Operable Unit No. 2, Marine Corps Base Camp Lejeune, near Jacksonville, North Carolina, approximately as shown.

1.8 PROJECT INFORMATION

1.8.1 Drawings, Maps and Specifications

One set of contract drawings, maps and specifications will be furnished to the Contractor without charge, except applicable publications incorporated into the technical provisions by reference. Additional sets will be furnished on request at the cost of reproduction. The work shall conform to the following contract drawings and maps, all of which form a part of these specifications and are available in the office of the Contracting Officer.

EFD Drawing No.	NAVFAC Drawing No.	Title
370690	4270690	T-1 Cover Sheet and General Notes
370691	4270691	C-1 Site Plan - North
370692	4270692	C-2 Site Plan - South
370693	4270693	C-3 Excavation Site Plans
370694	4270694	C-4 Details

1.8.2 Reference Report

The following reference reports are available for examination in the office of the Navy's Technical Representative and is intended only to show the existing conditions. The reports and drawings are the property of the Government and shall not be used for any purpose other than that intended by the specification.

Reports

A. "Draft Remedial Investigation for Operable Unit No. 2 (Sites 6 and 9) Marine Corps Base Camp Lejeune", Baker Environmental, Inc., dated June 1993.

B. "Draft Feasibility Study for Operable Unit No. 2 (Sites 6 and 9) Marine Corps Base Camp Lejeune", Baker Environmental, Inc., dated June 1993.

C. "Draft Proposed Remedial Action Plan for Operable Unit No. 2 (Sites 6 and 9) Marine Corps Base Camp Lejeune", Baker Environmental, Inc., dated June 1993.

1.8.3 Test Pits and Analytical Results

Test pit logs and analytical results from drum and test pit soil sampling prepared by Baker Environmental, Inc. follow this section of these specifications.

1.9 PROJECT SCHEDULE AND TIME CONSTRAINTS

The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 180 calendar days after the required notice to proceed. The time stated for completion shall include final cleanup of the premises. The time stated for completion does not include the maintenance period for the seeding of disturbed areas.

1.10 SAFETY PROGRAM

In addition to safety requirements in the Basic Contract, the Contractor shall implement a safety program conforming to the requirements of Federal, state, and local laws, rules and regulations. The program shall include, but is not limited to, the following:

a. Occupational Safety and Health Standards

b. COE EM-385-1-1

c. Contract Clause entitled "Accident Prevention." In this clause, the date of COE EM-385-1-1 should be 1 October 1992.

d. NFPA 241

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 FACILITIES AND SERVICES

The Contractor shall provide all temporary facilities necessary for the proper completion of the work, as necessary and as specified.

3.1.1 Availability of Utilities Services

MCB Camp Lejeune will provide electrical service from a utility pole in Storage Lot 203. It is the responsibility of the Contractor to provide the electrical hook-up and the electric meter. The Contractor shall provide all other utilities.

3.1.2 Contractor's Storage Areas

The clause of the Contract Clauses entitled "Operations and Storage Areas" and the following apply:

3.1.2.1 Storage in Existing Buildings

Storage in existing buildings will not be allowed.

3.1.2.2 Open Site Storage Size and Location

The open site available for storage shall be confined to the areas inside the fenced portion of Storage Lot 203.

3.1.3 Trailers, Storage, and Temporary Buildings

Locate trailers, storage, and temporary buildings where directed and within the indicated operations area. Trailers or storage buildings will be permitted where space is available subject to the approval of the Navy's Technical Representative. The trailers or storage buildings shall be suitably painted and kept in a good state of repair. Failure of the Contractor to maintain the trailers or storage buildings in good condition will be considered sufficient reason to require their removal.

3.1.3.1 Storage and Office Trailers

Trailers must meet state law requirements and must be in good condition.

Trailers shall be lockable and shall be locked when not in use.

Trailers shall have a sign in lower left hand corner of left door of trailer with the following information: company name, address, registration number of trailer or vehicle identification number, location on base, duration of contract or stay on-base, contract number, local on-base phone number, off base phone number of main office, and emergency recall person and phone number.

3.1.4 Cleaning Up

During the progress of the remediation, the work area and adjacent areas shall be kept clean and free of all rubbish, surplus materials, and unneeded construction equipment.

No material or debris shall be allowed to flow or wash into watercourses, ditches, gutters, drains, or pipes.

The Contractor shall remove all temporary buildings and structures built under this contract on or before the completion of the work.

All materials and equipment installed by the Contractor or any subcontractors shall be thoroughly clean, and on completion of the work shall deliver it undamaged and in fresh and new-appearing condition.

The Contractor shall restore or replace, when and as directed by the Navy's Technical Representative, any property damaged by the contract work and equipment or by employees. The property shall be restored in a condition at least equal to that existing prior to the beginning of construction operations. Suitable materials, equipment, and methods shall be used for such restoration. The restoration of property shall be done promptly and shall not be left until the end of the contract period.

3.2 RESTRICTIONS ON OPERATIONS

3.2.1 Scheduling

The Contractor shall schedule the work as to cause the least amount of interference with station operations. Work schedules shall be subject to the approval of the Officer in Charge of Construction. Permission to interrupt station roads shall be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

3.2.2 Regular Work Hours

The regular work hours for MCB Camp Lejeune are 0645 to 1615.

3.2.3 Work Outside Regular Hours

If the Contractor desires to carry on work outside regular hours or on Saturdays, Sundays, or holidays, the Contractor shall submit an application to the Officer in Charge of Construction two days prior to the scheduled working date. The Contractor shall allow ample time to enable satisfactory arrangements to be made by the Government for inspecting the work in progress. At night, the Contractor shall light the different parts of the work in an approved manner.

3.2.4 Security Requirements

No employee or representative of the Contractor will be admitted to the work site without satisfactory proof of United States citizenship.

3.2.4.1 Extraordinary Security Requirements

The clause of the Contract Clauses entitled "Identification of Employees" and the following apply:

a. Equipment Markings: Equipment owned or rented by the company will have the company name painted or stenciled on the equipment in a conspicuous location. Rented equipment is to be conspicuously marked with a tag showing who rented it.

3.2.5 Restrictions On Equipment

3.2.5.1 Radio Transmitter Restrictions

The Contractor shall conform to the restrictions and procedures for the use of radio transmitting equipment, as directed by the Navy's Technical Representative. Do not use transmitters without prior approval.

3.3 ACTIONS REQUIRED OF THE CONTRACTOR

3.3.1 Location of Underground Facilities

The Contractor shall verify the elevation and location of existing piping, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated in locations to be traversed during excavation. MCB Camp Lejeune Base Maintenance may provide utility location. Base Maintenance must be contacted two days prior to commencement of excavation.

3.3.2 Station Permits

The Contractor shall obtain station permits pursuant to paragraph entitled "Station Regulations." Permits are required for, but not necessarily limited to, welding and digging. Burning will not be permitted. The Contractor shall allow 7 calendar days for processing of the applications.

3.3.3 Storm Protection

If a warning of gale force winds is issued, take precautions to minimize any danger to persons, and protect the work and any nearby Government property. Precautions shall include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work if storms of lesser intensity pose a threat to the work or any nearby Government property.

3.4 PUBLIC RELEASE OF INFORMATION

a. The Contractor shall not publicly disclose any information concerning any aspect of the materials or services related to this delivery order without the prior written approval of the Navy's Technical Representative.

b. The Contractor shall insert the substance of clause "(a)" of this paragraph in each subcontract and purchase order relating to the

project.

3.5 SUBMITTALS FROM BASIC CONTRACT

3.5.1 As-Built Records

Maintain one sepia and three sets of full size as-built drawings in accordance with the Basic Contract Section 6.11.5 "As-Builts." Upon completion of the project submit the certified drawings to the Navy's Technical Representative.

3.5.2 Site Health and Safety Plan

Within 20 days of issue delivery order, prepare and submit to the Navy's Technical Representative a Site Health and Safety Plan which complies with the Basic Contract Part 3.0 "Health and Safety."

3.5.3 Sampling and Analysis Plan

Within 20 days of issue delivery order, prepare and submit to the Navy's Technical Representative a Sampling and Analysis Plan in accordance with 40 CFR 300.415 (b)(4)(ii), describing all sampling and analyses proposed for the intended work to be approved by the Navy's Technical Representative. The Sampling and Analysis Plan shall consist of two parts: the field sampling plan and the quality assurance project plan.

3.5.4 Construction Schedule

Within 20 days of issue delivery order, prepare and submit to the Navy's Technical Representative a schedule showing the proposed start and finish dates of all portions of the proposed construction.

3.5.5 Work Plan

Within 20 days of issue delivery order, prepare and submit a Work Plan which includes the following sections: Summary of Work, the tasks to be performed, a task breakdown, the project organization, an Environmental Protection Plan, a Chemical Quality Management Plan and required catalog data.

3.5.6 Status Reports

All status reports shall comply with the Delivery Order # 0001. Submit a Technical Progress Report, Cost Performance Report, Modification Log, Time-Scaled Logic Diagram, Government Materials Tracking Report, Variance Analysis Report, and Waste Materials Report. Submit the first delivery order status report approximately 30 days after issuance of the delivery order. Thereafter, submit status reports every 30 days. Status report periods shall be consistent with the invoice reporting periods.

3.5.7 CQC Plan Addenda

Within 20 days of issuance of the delivery order, submit a CQC Plan Addenda which complies with Part 6 of the Basic Contract.

3.5.8 Testing Laboratory Qualification

Within 15 days of issuance of the delivery order, submit Qualifications of each Laboratory which will be used. This submittal must comply with Part 6 of the Basic Contract.

3.5.9 Test Results Summary Report

A summary report of all field tests containing both "required" and "actual" results plus "passed" or "failed" for conforming, non-conforming and repeating test results shall be submitted to the Navy's Technical Representative at the end of each month in accordance with Section 6.10.1 of the Basic Contract.

3.5.10 Daily Report to Inspector (DRI)

The DRI shall be prepared and submitted daily to the Navy's Technical Representative in accordance with Section 6.11.1 of the Basic Contract.

3.5.11 Submittal Status Log

The CQC Representative shall submit a completed Submittal Status Log to document quality control for materials, inspection and testing in accordance with Part 6.0 of the Basic Contract.

3.5.12 Permits

Within 20 days of issuance of the delivery order, submit draft copies of the following permits required for on-site activities:

a. Excavation Permit; from the Public Works Officer, Utilities Division

b. Hot Works Permit; from the Public Works Officer, Utilities Division

3.5.13 Contractor's Closeout Report

Submit upon completion of the project. This report shall include: Introduction, Summary of Action, Final Health and Safety Report, Summary of Record Documents, Field Changes and Contract Modification, Final Documents, Summary of Chemical and Geotechnical Testing, Offsite Disposition of Materials, and QC Summary Report.

3.6 REQUIRED INSURANCE

3.6.1 Minimum Coverage

The Contractor shall procure and maintain during the entire period of performance under this contract the following minimum insurance cover:

Type of Insurance	Per Person	Per Occurrence	Property per Occurrence
1. Comprehensive Gen'l Liability		$500,000	

2. Automobile Liability	$200,000	$500,000	$20,000

3. Workmen's Compensation: As required by Federal and State Workmen's compensation and occupational disease statutes.

4. Employer's Liability Coverage: $100,000 except in states where workmen's compensation may not be written by private carrier.

5. Other: As required by state law.

3.6.2 Insurance - Work on a Government Installation (Sept 1989)

3.6.2.1 General Requirements

The Contractor shall, at its own expense, provide and maintain during the entire performance period of this contract the minimum amounts of insurance required in the Schedule or elsewhere in the contract.

3.6.2.2 Insurance Certification

Before commencing work under this contract, the Contractor shall certify to the Navy's Technical Representative in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective (1) for such period as the laws of the State in which this contract is to be performed prescribe or (2) until 30 days after the insurer or the Contractor gives written notice to the Navy's Technical Representative, whichever period is longer.

3.6.2.3 Notification

The Contractor shall insert the substance of this clause, including this paragraph, in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractor's proof of required insurance, and shall make copies available to the Navy's Technical Representative upon request (FAR 52,228-5).

-- End of Section --

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133
TEST PIT NO.: 6-TP5
COORDINATES: EAST ____ NORTH: ____
SURFACE ELEVATION: ____ DATE: 3 MARCH 93
WEATHER: OVERCAST 50°F

REMARKS: SOIL APPEARED UNDISTURBED, 1-GALLON AND 5-GALLON CONTAINERS PRESENT NEAR TEST PIT AREA, SEVERAL CONTAINERS LOCATED WITHIN SUBSURFACE.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevati
1–2	NA	<2	UNDISTURBED SOIL DISTINCT HORIZONS PRESENT NO DEBRIS PRESENT	
3–4	NA	<2	UNDISTURBED SOIL DISTINCT HORIZONS PRESENT SMALL PIECES OF METAL DEBRIS.	
5–6	NA	<2	METAL DEBRIS INCREASES SEVERAL ½ GALLON UP TO 5 GALLON CONTAINERS ENCOUNTERED FROM 5'–7' SUBSURFACE CONTAINERS	
7–8	6-TP5-02 6-TP5D-02 6-TP5GR-02	10	SAMPLE TAKEN UNDERNEATH CONTAINERS SAMPLE 6-TP5-02 AND DUPLICATE SAMPLE 6-TP5D-02. SAMPLE 6-TP5GR-02 WAS OF A GREENISH BLUE GREASE TYPE MATERIAL FROM ONE OF THE CONTAINERS.	
9–10	NA	10	UNDISTURBED SOIL DISTINCT HORIZONS PRESENT	
11–15				

CONTRACTOR: GEOCENTERS
EQUIPMENT: CASE 580 BACKHOE
BAKER REP.: PETE MONDO
TEST PIT NO.: 6-TP5
SHEET 1 OF

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133 TEST PIT NO.: 6-TP7
COORDINATES: EAST NORTH:
SURFACE ELEVATION: DATE: 3 MARCH 93
WEATHER: OVERCAST 50°F

REMARKS: SOIL APPEARED UNDISTURBED, 1-GALLON AND 5-GALLON CONTAINERS PRESEN NEAR TEST PIT AREA, SEVERAL CONTAINERS LOCATED WITHIN SUBSURFACE

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevati
1–2	NA	<2	UNDISTURBED SOIL DISTINCT HORIZONS PRESENT NO DEBRIS PRESENT	
3–4	NA	<2	UNDISTURBED SOIL DISTINCT HORIZONS PRESENT SMALL PIECES OF METAL DEBRIS	
5–6	NA	<2	METAL DEBRIS INCREASES SEVERAL ½ GALLON UP TO 5 GALLON CONTAINERS ENCOUNTERED FROM 5'–7' SUBSURFACE CONTAINERS	
7–8	6-TP7-02	10	SAMPLE 6-TP7-02 TAKEN UNDERNEATH CONTAINERS. TOTAL EXCAVATION DEPTH.	
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEOCENTERS BAKER REP.: PETE MCNEAY
EQUIPMENT: CASE 550 BACKHOE TEST PIT NO.: 6-TP7 SHEET 1 (

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE R1/FS
S.O. NO.: 19133
TEST PIT NO.: GS 1960 A
COORDINATES: EAST ____ NORTH: ____
SURFACE ELEVATION: ____ DATE: 29 SEPT. 92
WEATHER: P. CLOUDY 65°F

REMARKS: MILITARY/CONSTRUCTION DEBRIS ENCOUNTERED. ALSO ENCOUNTERED WHITE SOLID AND BROWN OILY MATERIAL. SAMPLES OBTAINED.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			COMMUNICATION WIRE, SCRAP METAL, 95-105 MM CARTRIDGES (SPENT). CLASSIFIED AS MILITARY/ CONSTRUCTION DEBRIS.	
2	NA	1.0		
3	6 GS 1960 01	1.0	COMMUNICATION WIRE, SCRAP METAL, 95-105 MM CARTRIDGES (SPENT) WHITE SOLID POWDER AND OILY BROWN VISCOUS LIQUID. CLASSIFIED AS MILITARY/ CONSTRUCTION DEBRIS.	
4				
5	6 GS 1960 02	1.0	COMMUNICATION WIRE, SCRAP METAL. EXCAVATION TERMINATED AT ~ 5' POINT DUE TO THE AMOUNT OF COMMUNICATION WIRE ENCOUNTERED.	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC.
EQUIPMENT: CASE 580 BACKHOE
BAKER REP.: KENNETH J. MARTIN
TEST PIT NO.: GS 1960 A
SHEET 1 O

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133 TEST PIT NO.: GS 1960 A (2)
COORDINATES: EAST NORTH:
SURFACE ELEVATION: DATE: 29 SEPT. 92
WEATHER: P. CLOUDY 65°F

REMARKS: MILITARY/CONSTRUCTION DEBRIS ENCOUNTERED. SECOND TEST PIT ALONG GS 1960 A.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			COMMUNICATION WIRE, SCRAP METAL 95-105 MM CARTRIDGES (SPENT). CLASSIFIED AS MILITARY/ CONSTRUCTION DEBRIS.	
2	NA	NA		
3			COMMUNICATION WIRE, SCRAP METAL, 95-105MM CARTRIDGES (SPENT) WHITE POWDER ENCOUNTERED. CLASSIFIED AS MILITARY/CONSTRUCTION DEBRIS.	
4	NA	NA		
5			COMMUNICATION WIRE, SCRAP METAL. EXCAVATION TERMINATED DUE TO THE AMOUNT OF COMMUNICATION WIRE ENCOUNTERED.	
6	NA	NA		
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC. BAKER REP.: KENNETH J. MARTIN
EQUIPMENT: CASE 580 BACKHOE TEST PIT NO.: GS 1960 A (2) SHEET 1 O

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133 TEST PIT NO.: GS 1960 A (2)
COORDINATES: EAST _____ NORTH: _____
SURFACE ELEVATION: _____ DATE: 29 SEPT. 92
WEATHER: P. CLOUDY 65°F

REMARKS: MILITARY / CONSTRUCTION DEBRIS ENCOUNTERED. SECOND TEST PIT ALONG GS 1960 A.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			COMMUNICATION WIRE, SCRAP METAL 95-105 MM CARTRIDGES (SPENT). CLASSIFIED AS MILITARY/ CONSTRUCTION DEBRIS.	
2	NA	NA		
3			COMMUNICATION WIRE, SCRAP METAL, 95-105 MM CARTRIDGES (SPENT) WHITE POWDER ENCOUNTERED. CLASSIFIED AS MILITARY/CONSTRUCTION DEBRIS.	
4	NA	NA		
5			COMMUNICATION WIRE, SCRAP METAL. EXCAVATION TERMINATED DUE TO THE AMOUNT OF COMMUNICATION WIRE ENCOUNTERED.	
6	NA	NA		
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC. BAKER REP.: KENNETH J. MARTIN
EQUIPMENT: CASE 580 BACKHOE TEST PIT NO.: GS 1960 A (2) SHEET 1 OF

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133 TEST PIT NO.: GS 1960 B
COORDINATES: EAST _____ NORTH: _____
SURFACE ELEVATION: _____ DATE: 29 SEPT. 92
WEATHER: P. CLOUDY 65°F

REMARKS: A LOT OF MILITARY / CONSTRUCTION DEBRIS ENCOUNTERED. SAMPLE OBTAINED.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			COMMUNICATION WIRE, SCRAP METAL, BATTERY PACKS, CLASSIFIED AS MILITARY / CONSTRUCTION DEBRIS.	
2	NA	1.0		
3	6 GS 1960 01	1.0	COMMUNICATION WIRE, SCRAP METAL, BATTERY PACKS, BLUE/AQUA COLORED SOLID. SOIL NEAR BATTERY PACKS APPEARED SOMEWHAT SATURATED, MAY HAVE BEEN BATTERY ACID. CLASSIFIED AS MILITARY / CONSTRUCTION DEBRIS.	
4				
5			COMMUNICATION WIRE - TEST PIT WAS TERMINATED AT ~ 5' DUE TO THE AMOUNT OF COMMUNICATION WIRE ENCOUNTERED.	
6	NA	1.0		
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC. BAKER REP.: KENNETH J. MARTIN
EQUIPMENT: CASE 580 BACKHOE TEST PIT NO.: GS 1960 B SHEET 1 C

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE
S.O. NO.: 19133 TEST PIT NO.: GS 1960 B (2)
COORDINATES: EAST _____ NORTH: _____
SURFACE ELEVATION: _____ DATE: 29 SEPT. 92
WEATHER: P. CLOUDY 65 °F

REMARKS: A LOT OF MILITARY / CONSTRUCTION DEBRIS ENCOUNTERED. NO SAMPLE OBTAINED.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevatio
1			COMMUNICATION WIRE, SCRAP METAL, BATTERY PACKS CLASSIFIED AS MILITARY/CONSTRUCTION DEBRIS.	
2	NA	NA		
3			COMMUNICATION WIRE, SCRAP METAL, BATTERY PACKS, BLUE/AQUA COLORED SOLID. SOIL NEAR BATTERY PACKS APPEARED SOMEWHAT SATURATED. CLASSIFIED AS MILITARY/CONSTRUCTION DEBRIS.	
4	NA	NA		
5			COMMUNICATION WIRE - TEST PIT AGAIN TERMINATED AT ~ 5' DUE TO THE AMOUNT OF COMMUNICATION WIRE ENCOUNTERED.	
6	NA	NA		
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC. BAKER REP.: KENNETH J. MARTIN
EQUIPMENT: CASE 580 BACKHOE TEST PIT NO.: GS 1960 B (2) SHEET 1 C

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE
S.O. NO.: 19133 TEST PIT NO.: GS 1960 C
COORDINATES: EAST NORTH:
SURFACE ELEVATION: DATE: 29 SEPT. 92
WEATHER:

REMARKS: SOIL APPEARED UNDISTURBED. NO DEBRIS OR EVIDENCE OF BURIED MATERIAL NO SAMPLE TAKEN.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			SAND UNDISTURBED SOILS (ROOTS PRESENT) NO DEBRIS PRESENT	
2	NA	1.0		
3			UNDISTURBED SOIL NO DEBRIS PRESENT	
4	NA	1.0		
5			UNDISTURBED SOIL NO DEBRIS PRESENT	
6	NA	1.0		
7			UNDISTURBED SOIL NO DEBRIS PRESENT	
8	NA	1.0		
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC. BAKER REP.: KENNETH J. MARTIN
EQUIPMENT: CASE 580 BACKHOE TEST PIT NO.: GS 1960 C SHEET 1 OF

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133 TEST PIT NO.: GS 1960 D
COORDINATES: EAST _____ NORTH: _____
SURFACE ELEVATION: _____ DATE: 29 SEPT. 92
WEATHER: P. CLOUDY 65°F

REMARKS: COMMUNICATION WIRE 1-5 GALLON CONTAINERS (BUCKETS) RUSTED THROUGH. SAMPLE OBTAINED OF GRUD/SLUDGE.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			COMMUNICATION WIRE, SCRAP METAL AND 5-GALLON BUCKETS CLASSIFIED AS MILITARY DEBRIS.	
2	NA	1.0		
3	G GS 1960 02	1.0	1-5 GALLON CONTAINERS CONTAINING LIQUIDS (MAY HAVE BEEN WATER.) SAMPLE OBTAINED OF LIQUID/SLUDGE. CONTAINERS IN POOR CONDITION.	
4				
5	G GS 1960 03		1-5-GALLON CONTAINERS (BUCKETS). COMMUNICATION WIRE	
6		1.0	SAMPLE OBTAINED AT BOTOM OF TRENCH	
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS BAKER REP.: KENNETH J. MARTIN
EQUIPMENT: CASE 580 BACKHOE TEST PIT NO.: GS 1960 D SHEET 1 OF

TEST PIT RECORD

Baker Environmental, Inc.

PROJECT: CAMP LEJEUNE RI/FS
S.O. NO.: 19133
COORDINATES: EAST
SURFACE ELEVATION:
WEATHER: P. CLOUDY 65°F
TEST PIT NO.: GS 1960 E
NORTH:
DATE: 30 SEPT 92

REMARKS: M. LITTERY / CONSTRUCTION DEBRIS ENCOUNTERED. NO SAMPLE TAKEN.

DEFINITIONS

HNU = Photo Ionization Detector Reading
OVA = Organic Vapor Analyzer Reading

Depth (Ft.)	Sample Type and No.	HNU or (OVA) ppm Field	Visual Description	Elevation
1			COMMUNICATION WIRE AND ROOTS ENCOUNTERED.	
2	NA	1.0		
3			BURIED 5-GALLON (BUCKET) CONTAINER 3.0 PPM ON OVA. COMMUNICATION WIRE SCRAP METAL ENCOUNTERED.	
4	NA	1.0		
5			SOIL APPEARED UNDISTURBED AT 5' MARK. SMALL AMOUNT OF COMMUNICATION WIRE ENCOUNTERED.	
6	NA	2.0		
7				
8				
9				
10				
11				
12				
13				
14				
15				

CONTRACTOR: GEO-CENTERS, INC.
EQUIPMENT: CASE 580 BACKHOE
BAKER REP.: KENNETH J. MARTIN
TEST PIT NO.: GS 1960 E
SHEET 1 OF

TOXICITY CHARACTERISTICS LEACHING PROCEDURE (TCLP)

VOLATILE ORGANICS TARGET ANALYTES

EPA Method 8240

Client: Baker Environmental

Client Sample ID: 6-GS1960D-02 Date Sampled: 9/29/92

Laboratory ID: 920556-04 Date TCLP Performed: 10/06/92

Concentration in: ug/L (ppb) Date Leachate Analyzed: 10/10/92

Target Analyte	Sample Concentration	Method Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	8	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethylene	ND	5
Methylethylketone	ND	10
Tetrachloroethylene	ND	5
Trichloroethylene	ND	5
Vinyl chloride	ND	10

ND = Not detected

Reported by:_____ Approved by:_____

TOXICITY CHARACTERISTICS LEACHING PROCEDURE (TCLP)

SEMIVOLATILE ORGANIC ANALYSIS

EPA METHOD 8270

Client: Baker Environmental

Client Sample ID: 6-GS1960D-02

Laboratory ID: 920556-04

Concentration in: ug/L (ppb)

Date Sampled: 9/29/92

Date TCLP Performed: 10/09/92

Date Leachate Extracted: 10/14/92

Date Extract Analyzed: 10/31/92

Target Analyte	Sample Concentration	Method Reporting Limit
Pyridine	ND	33
2,4-Dinitrotoluene	ND	33
Hexachlorobenzene	ND	33
Hexachloro-1,3-butadiene	ND	33
Hexachloroethane	ND	33
Nitrobenzene	ND	33
1,4-Dichlorobenzene	ND	33
Methylphenols (total)	ND	33
Pentachlorophenol	ND	83
2,4,5-Trichlorophenol	ND	83
2,4,6-Trichlorophenol	ND	33

ND = Not detected

Reported by:_____ Approved by:_____

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6GS1960D0E

Name: CEIMIC CORP Contract: BAKER

Lab Code: CEIMIC Case No.: 19133 SAS No.: SDG No.: 6GS196

Matrix: (soil/water) WATER Lab Sample ID: 920556-04

Sample wt/vol: 300.0 (g/mL) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 10/01/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/09/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 10/23/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	gamma-BHC (Lindane)	0.17	U
	Heptachlor	0.17	U
1024-57-3	Heptachlor epoxide	0.17	U
	Endrin	0.33	U
72-43-5	Methoxychlor	1.7	U
5103-71-9	alpha-Chlordane	0.17	U
5103-74-2	gamma-Chlordane	0.17	U
8001-35-2	Toxaphene	17	U

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

ORGANOCHLORINE HERBICIDES

EPA Method 8150

Client: Baker Environmental

Client ID: 6-GS1960D-02 Laboratory ID: 920556-04

Date Sample Received: 10/01/92 Date Sample Prepared: 10/09/92

Date Sample Analyzed: 10/21/92 Concentration in: ug/L (ppb)

Target Analyte	Sample Concentration	Method Reporting Limits
2,4-D	ND	30
2,4,5-TP (Silvex)	ND	10

ND = Not detected

Reported by: XS Approved by:

TCLP METALS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE ID: 60D2

Lab Name: CEIMIC Contract: BAKER

Lab Code: CEIMIC Case No.: 19133 SAS No.: 6 SDG No.: 60A1

Matrix (soil/water): WATER Lab Sample ID: 01556-04S

Level (low/med): LOW Date Received: 10/01/92

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	40.0	U		P
7440-39-2	Barium	274			P
7440-43-9	Cadmium	5.7	B		P
7440-47-3	Chromium	17.8	B		P
7439-92-1	Lead	10000			P
7439-97-6	Mercury	0.04	U	N	A
7782-49-2	Selenium	52.2	B		P
7440-22-4	Silver	2.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

INORGANIC ANALYTES

Client: Baker Environmental

Client ID: 6-GS1960D-02

Laboratory ID: 920556-04

Date Sample Received: 10/01/92

Date Sampled: 9/29/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Flashpoint	NC	°F	200	10/18/92
pH	5.86	S.U	---	10/05/92
Reactive Sulfide +	5	mg/kg (ppm)	2	10/07/92
Reactive Cyanide +	ND	mg/kg (ppm)	0.5	10/12/92

NC = No combustion
ND = Not detected

+ Reported on an "as is" basis

Reported by: Approved by:

TOXICITY CHARACTERISTICS LEACHING PROCEDURE (TCLP)

VOLATILE ORGANICS TARGET ANALYTES

EPA Method 8240

Client: Baker Environmental

Client Sample ID: 6-GS1960D-03 Date Sampled: 9/29/92

Laboratory ID: 920556-05 Date TCLP Performed: 10/07/92

Concentration in: ug/L (ppb) Date Leachate Analyzed: 10/11/92

Target Analyte	Sample Concentration	Method Reporting Limit
Benzene	ND	5
Carbon tetrachloride	ND	5
Chlorobenzene	ND	5
Chloroform	ND	5
1,2-Dichloroethane	ND	5
1,1-Dichloroethylene	ND	5
Methylethylketone	ND	10
Tetrachloroethylene	ND	5
Trichloroethylene	ND	5
Vinyl chloride	ND	10

ND = Not detected

Reported by:_____ Approved by:_____

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

6GS1960D03

a ame: CEIMIC CORP Contract: BAKER

ab Code: CEIMIC Case No.: 19133 SAS No.: SDG No.: 6GS196

atrix: (soil/water) WATER Lab Sample ID: 920556-05

ample wt/vol: 300.0 (g/mL) ML Lab File ID:

Moisture: decanted: (Y/N) Date Received: 10/01/92

xtraction: (SepF/Cont/Sonc) SEPF Date Extracted: 10/09/92

oncentrated Extract Volume: 10000 (uL) Date Analyzed: 10/22/92

njection Volume: 1.00 (uL) Dilution Factor: 1.00

PC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
----------	gamma-BHC (Lindane)	0.17	U
----------	Heptachlor	0.17	U
1024-57-3	Heptachlor epoxide	0.17	U
----------	Endrin	0.33	U
72-43-5	Methoxychlor	1.7	U
5103-71-9	alpha-Chlordane	0.17	U
5103-74-2	gamma-Chlordane	0.17	U
8001-35-2	Toxaphene	17	U

TOXICITY CHARACTERISTICS LEACHING PROCEDURE (TCLP)

SEMIVOLATILE ORGANIC ANALYSIS

EPA METHOD 8270

Client: Baker Environmental

Client Sample ID: 6-GS1960D-03

Laboratory ID: 920556-05

Concentration in: ug/L (ppb)

Date Sampled: 9/29/92

Date TCLP Performed: 10/09/92

Date Leachate Extracted: 10/14/92

Date Extract Analyzed: 10/31/92

Target Analyte	Sample Concentration	Method Reporting Limit
Pyridine	ND	33
2,4-Dinitrotoluene	ND	33
Hexachlorobenzene	ND	33
Hexachloro-1,3-butadiene	ND	33
Hexachloroethane	ND	33
Nitrobenzene	ND	33
1,4-Dichlorobenzene	ND	33
Methylphenols (total)	ND	33
Pentachlorophenol	ND	83
2,4,5-Trichlorophenol	ND	83
2,4,6-Trichlorophenol	ND	33

ND = Not detected

Reported by:_____ Approved by:_____

TCLP METALS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE ID: 60D3

Lab Name: CEIMIC Contract: BAKER

Lab Code: CEIMIC Case No.: 19133 SAS No.: 6 SDG No.: 60A1

Matrix (soil/water): WATER Lab Sample ID: 01556-05S

Level (low/med): LOW Date Received: 10/01/92

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	40.0	U		P
7440-39-2	Barium	220			P
7440-43-9	Cadmium	1.9	U		P
7440-47-3	Chromium	3.6	U		P
7439-92-1	Lead	209			P
7439-97-6	Mercury	0.04	U	N	A
7782-49-2	Selenium	50.0	U		P
7440-22-4	Silver	2.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

ORGANOCHLORINE HERBICIDES

EPA Method 8150

Client: Baker Environmental

Client ID: 6-GS1960D-03 Laboratory ID: 920556-05

Date Sample Received: 10/01/92 Date Sample Prepared: 10/09/92

Date Sample Analyzed: 10/21/92 Concentration in: ug/L (ppb)

Target Analyte	Sample Concentration	Method Reporting Limits
2,4-D	ND	30
2,4,5-TP (Silvex)	ND	10

ND = Not detected

Reported by: XS Approved by:

INORGANIC ANALYTES

Client: Baker Environmental

Client ID: 6-GS1960D-03

Laboratory ID: 920556-05

Date Sample Received: 10/01/92

Date Sampled: 9/29/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Flashpoint	NC	°F	200	10/18/92
pH	6.56	S.U	---	10/05/92
Reactive Sulfide+	ND	mg/kg (ppm)	2	10/07/92
Reactive Cyanide+	ND	mg/kg (ppm)	0.5	10/12/92

NC = No combustion
ND = Not detected

+ Reported on an "as is" basis

Reported by: _____ Approved by: _____

CORPORATION
"Analytical Chemistry for Environmental Management"

March 17, 1993

Mr. Matthew D. Bartman
Baker Environmental
420 Rouser Road
Coraopolis, PA 15108

Dear Mr. Bartman:

The results of our analysis of sample 6-TP5GR-02 indicate the sample is a petroleum hydrocarbon product that closely matches #6 fuel oil. The sample readily dissolves in freon-113 and methylene chloride.

Analysis by scanning infrared spectroscopy shows the sample exhibits carbon-hydrogen bonding typical of petroleum hydrocarbons. No other functional groups were detected by scanning IR analysis.

Analysis by gas chromatography using flame ionization detection showed the chromatogram of sample 6-TPGR-02 exhibits an unresolved complex mixture with a pattern that most closely matches #6 fuel oil.

The concentration of #6 fuel oil in sample 6-TPGR-02 is 100%.

If you have any questions regarding our findings please don't hesitate to call us.

Sincerely,

Henry Leibovitz
GC Laboratory
Manager

HL/ll

enc.

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782 8900 • FAX (401) 782-8905

Parameter Name	Units	Location: 6-TP4-02 Depth: N/A Date Sampled: 3/3/93 Lab Id: 930095-12	6-TP5-02 N/A 3/3/93 930095-13	6-TP5-02D DUP TP502 3/3/93 930095-14	6-TP7-02 N/A 3/3/93 930095-15
ALPHA-BHC	UG/KG	1.8 U	1.8 U	38 U	3.1 J
BETA-BHC	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
DELTA-BHC	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
GAMMA-BHC(LINDANE)	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
HEPTACHLOR	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
ALDRIN	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
HEPTACHLOR EPOXIDE	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
ENDOSULFAN I	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
DIELDRIN	UG/KG	3.6 U	3.6 U	73 U	3.6 UJ
4,4'-DDE	UG/KG	3.6 U	3.6 U	73 U	7.4 J
ENDRIN	UG/KG	3.6 U	3.6 U	73 U	3.6 UJ
ENDOSULFAN II	UG/KG	3.6 U	3.6 U	73 U	3.6 UJ
4,4'-DDD	UG/KG	3.6 U	3.6 UJ	320 J	3.6 UJ
ENDOSULFAN SULFATE	UG/KG	3.6 U	3.6 U	73 U	3.6 UJ
4,4'-DDT	UG/KG	3.6 U	3.6 UJ	6600 J	3.6 UJ
METHOXYCHLOR	UG/KG	18 U	18 U	380 U	18 UJ
ENDRIN KETONE	UG/KG	3.6 U	3.6 U	73 U	3.6 UJ
ENDRIN ALDEHYDE	UG/KG	3.6 U	3.6 U	73 U	3.6 UJ
ALPHA CHLORDANE	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
GAMMA CHLORDANE	UG/KG	1.8 U	1.8 U	38 U	1.8 UJ
TOXAPHENE	UG/KG	180 U	180 U	3800 U	180 UJ
PCB-1016	UG/KG	36 U	36 U	730 U	36 UJ
PCB-1221	UG/KG	73 U	72 U	1500 U	73 UJ
PCB-1232	UG/KG	36 U	36 U	730 U	36 UJ
PCB-1242	UG/KG	36 U	36 U	730 U	36 UJ
PCB-1248	UG/KG	36 U	36 U	730 U	36 UJ
PCB-1254	UG/KG	36 U	36 U	730 U	36 UJ
PCB-1260	UG/KG	36 U	36 U	730 U	36 UJ
CHLOROMETHANE	UG/KG	11 U	11 U	12 U	12 U
BROMOMETHANE	UG/KG	11 U	11 U	12 U	12 U
VINYL CHLORIDE	UG/KG	11 U	11 U	12 U	12 U
CHLOROETHANE	UG/KG	11 U	11 U	12 U	12 U
METHYLENE CHLORIDE	UG/KG	11 U	11 U	12 U	12 U
ACETONE	UG/KG	11 U	11 U	12 U	12 U
CARBON DISULFIDE	UG/KG	11 U	11 U	12 U	12 U
1,1-DICHLOROETHENE	UG/KG	11 U	11 U	12 U	12 U
1,1-DICHLOROETHANE	UG/KG	11 U	11 U	12 U	12 U
1,2-DICHLOROETHENE	UG/KG	11 U	11 U	12 U	12 U
CHLOROFORM	UG/KG	11 U	11 U	12 U	12 U
1,2-DICHLOROETHANE	UG/KG	11 U	11 U	12 U	12 U
2-BUTANONE	UG/KG	11 U	11 U	12 U	12 U
1,1,1-TRICHLOROETHANE	UG/KG	11 U	11 U	12 U	12 U
CARBON TETRACHLORIDE	UG/KG	11 U	11 U	12 U	12 U
BROMODICHLOROMETHANE	UG/KG	11 U	11 U	12 U	12 U
1,2-DICHLOROPROPANE	UG/KG	11 U	11 U	12 U	12 U
CIS-1,3-DICHLOROPROPENE	UG/KG	11 U	11 U	12 U	12 U
TRICHLOROETHENE	UG/KG	11 U	11 U	12 U	12 U
DIBROMOCHLOROMETHANE	UG/KG	11 U	11 U	12 U	12 U
1,1,2-TRICHLOROETHANE	UG/KG	11 U	11 U	12 U	12 U
BENZENE	UG/KG	11 U	11 U	12 U	12 U

Parameter Name	Units	Location: 6-TP4-02 Depth: N/A Date Sampled: 3/3/93 Lab Id: 930095-12	6-TP5-02 N/A 3/3/93 930095-13	6-TP5-D2D DUP TP502 3/3/93 930095-14	6-TP7-02 N/A 3/3/93 930095-15
TRANS-1,3-DICHLOROPROPENE	UG/KG	11 U	11 U	12 U	12 U
BROMOFORM	UG/KG	11 U	11 U	12 U	12 U
4-METHYL-2-PENTANONE	UG/KG	11 U	11 U	12 U	12 U
2-HEXANONE	UG/KG	11 U	11 U	12 U	12 U
TETRACHLOROETHENE	UG/KG	3 J	1 J	12 U	12 U
1,1,2,2-TETRACHLOROETHANE	UG/KG	11 U	11 U	12 U	12 U
TOLUENE	UG/KG	11 U	11 U	12 U	12 U
CHLOROBENZENE	UG/KG	11 U	11 U	12 U	12 U
ETHYLBENZENE	UG/KG	11 U	11 U	12 U	12 U
STYRENE	UG/KG	11 U	11 U	12 U	12 U
TOTAL XYLENES	UG/KG	11 U	11 U	12 U	12 U
PHENOL	UG/KG	360 U	360 U	360 U	7200 UJ
BIS(2-CHLOROETHYL) ETHER	UG/KG	360 U	360 U	360 U	7200 U
2-CHLOROPHENOL	UG/KG	360 U	360 U	360 U	7200 U
1,3-DICHLOROBENZENE	UG/KG	360 U	360 U	360 U	7200 U
1,4-DICHLOROBENZENE	UG/KG	360 U	360 U	360 U	7200 U
1,2-DICHLOROBENZENE	UG/KG	360 U	360 U	360 U	7200 U
2-METHYLPHENOL	UG/KG	360 U	360 U	360 U	7200 U
2,2'-OXYBIS (1-CHLOROPROPANE)	UG/KG	360 UJ	360 UJ	360 UJ	7200 UJ
4-METHYLPHENOL	UG/KG	360 U	360 U	360 U	7200 U
N-NITROSODI-N-PROPYLAMINE	UG/KG	360 U	360 U	360 U	7200 U
HEXACHLOROETHANE	UG/KG	360 U	360 U	360 U	7200 U
NITROBENZENE	UG/KG	360 U	360 U	360 U	7200 U
ISOPHORONE	UG/KG	360 U	360 U	360 U	7200 U
2-NITROPHENOL	UG/KG	360 U	360 U	360 U	7200 U
2,4-DIMETHYLPHENOL	UG/KG	360 U	360 U	360 U	7200 U
BIS(2-CHLOROETHOXY) METHANE	UG/KG	360 U	360 U	360 U	7200 UJ
2,4-DICHLOROPHENOL	UG/KG	360 U	360 U	360 U	7200 U
1,2,4-TRICHLOROBENZENE	UG/KG	360 U	360 U	360 U	7200 U
NAPHTHALENE	UG/KG	360 U	360 U	360 U	7200 U
4-CHLOROANILINE	UG/KG	360 U	360 U	360 U	7200 U
HEXACHLOROBUTADIENE	UG/KG	360 U	360 U	360 U	7200 U
4-CHLORO-3-METHYLPHENOL	UG/KG	360 U	360 U	360 U	7200 U
2-METHYLNAPHTHALENE	UG/KG	360 U	360 U	360 U	7200 U
HEXACHLOROCYCLOPENTADIENE	UG/KG	360 U	360 U	360 U	7200 U
2,4,6-TRICHLOROPHENOL	UG/KG	360 U	360 U	360 U	7200 U
2,4,5-TRICHLOROPHENOL	UG/KG	860 U	870 U	880 U	17000 U
2-CHLORONAPHTHALENE	UG/KG	360 U	360 U	360 U	7200 U
2-NITROANILINE	UG/KG	860 U	870 U	880 U	17000 U
DIMETHYL PHTHALATE	UG/KG	360 U	360 U	360 U	7200 U
ACENAPHTHYLENE	UG/KG	360 U	360 U	360 U	7200 U
2,6-DINITROTOLUENE	UG/KG	360 U	360 U	360 U	7200 U
3-NITROANILINE	UG/KG	860 U	870 U	880 U	17000 U
ACENAPHTHENE	UG/KG	360 U	360 U	360 U	7200 U
2,4-DINITROPHENOL	UG/KG	860 U	870 U	880 U	17000 U
4-NITROPHENOL	UG/KG	860 U	870 U	880 U	17000 U
DIBENZOFURAN	UG/KG	360 U	360 U	360 U	7200 U
2,4-DINITROTOLUENE	UG/KG	360 U	360 U	360 U	7200 U
DIETHYL PHTHALATE	UG/KG	360 U	360 U	360 U	7200 U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	360 U	360 U	360 U	7200 U

DATA SUMMARY
REMEDIAL INVESTIGATION CTO-0133
MCB CAMP LEJEUNE, NORTH CAROLINA
CASE No. 19133 SDG No. 6-GW300-02

Parameter Name	Units	Location: 6-TP4-02 Depth: N/A Date Sampled: 3/3/93 Lab Id: 930095-12	6-TP5-02 N/A 3/3/93 930095-13	6-TP5-020 DUP TP502 3/3/93 930095-14	6-TP7-02 N/A 3/3/93 930095-15
FLUORENE	UG/KG	360 U	360 U	360 U	7200 U
4-NITROANILINE	UG/KG	860 U	870 U	880 U	17000 U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	860 U	870 U	880 UJ	17000 U
N-NITRISODIPHENYLAMINE	UG/KG	360 U	360 U	360 UJ	7200 U
4-BROMOPHENYL PHENYL ETHER	UG/KG	360 U	360 U	360 UJ	7200 U
HEXACHLOROBENZENE	UG/KG	360 U	360 U	360 UJ	7200 U
PENTACHLOROPHENOL	UG/KG	860 U	870 U	880 UJ	17000 U
PHENANTHRENE	UG/KG	360 U	360 U	360 UJ	7200 U
ANTHRACENE	UG/KG	360 U	360 U	360 UJ	7200 U
DI-N-BUTYL PHTHALATE	UG/KG	360 U	360 U	360 UJ	7200 U
FLUORANTHENE	UG/KG	360 U	360 U	360 UJ	7200 U
CARBAZOLE	UG/KG	360 U	360 U	360 UJ	7200 U
PYRENE	UG/KG	360 U	360 U	360 UJ	7200 U
BUTYL BENZYL PHTHALATE	UG/KG	360 U	360 U	360 UJ	7200 U
3,3-DICHLOROBENZIDINE	UG/KG	360 U	360 U	360 UJ	7200 U
BENZO(A)ANTHRACENE	UG/KG	360 U	360 U	360 UJ	7200 U
CHRYSENE	UG/KG	360 U	360 U	360 UJ	7200 U
BIS(2-ETHYLHEXYL)PHTHALATE	UG/KG	360 U	360 U	360 UJ	7200 U
DI-N-OCTYL PHTHALATE	UG/KG	360 U	360 U	360 UJ	7200 U
BENZO(B)FLUORANTHENE	UG/KG	360 U	360 U	360 UJ	7200 U
BENZO(K)FLUORANTHENE	UG/KG	360 U	360 U	360 UJ	7200 U
BENZO(A)PYRENE	UG/KG	360 U	360 U	360 UJ	7200 U
INDENO(1,2,3-CD) PYRENE	UG/KG	360 U	360 U	360 UJ	7200 U
DIBENZ(A,H)ANTHRACENE	UG/KG	360 U	360 U	360 UJ	7200 U
BENZO(G,H,I)PERYLENE	UG/KG	360 U	360 U	360 UJ	7200 U

DATA SUMMARY
REMEDIAL INVESTIGATION CTO-0133
MCB CAMP LEJEUNE, NORTH CAROLINA
CASE No. 19133 SDG No. W30002

		Location:	6-TP2-02	6-TP3-02	6-TP4-02	6-TP5-02
		Depth:	N/A	N/A	N/A	N/A
		Date Sampled:	3/3/93	3/3/93	3/3/93	3/3/93
		Lab Id:	30095-10	30095-11	30095-12	30095-13
ALUMINUM	MG/KG		7910.00	3490.00	3540.00	11300.00 J
ANTIMONY	MG/KG		4.60 UR	4.10 UR	4.60 UR	4.50 UR
ARSENIC	MG/KG		2.20	0.68 B	0.70 B	[illegible]
BARIUM	MG/KG		36.20 B	7.60 B	8.00 B	18.70 B
BERYLLIUM	MG/KG		0.21 U	0.19 U	0.21 U	0.20 U
CADMIUM	MG/KG		0.63 U	0.56 U	0.63 U	0.61 U
CALCIUM	MG/KG		212.00 B	22.50 U	95.50 U	508.00 B
CHROMIUM	MG/KG		7.40	2.50	3.60	10.90
COBALT	MG/KG		0.74 B	0.56 U	0.63 U	0.79 B
COPPER	MG/KG		4680.00	1.10 JB	1.20 JB	2.90 B
IRON	MG/KG		4970.00	1610.00	1950.00	6740.00 J
LEAD	MG/KG		9.30 J	3.50 J	4.40 J	6.30 J
MAGNESIUM	MG/KG		197.00 B	84.00 B	83.30 B	321.00 B
MANGANESE	MG/KG		8.00	2.60 B	4.90	7.10
MERCURY	MG/KG		0.05 U	0.05 U	0.04 U	0.06 U
NICKEL	MG/KG		3.60 U	3.20 U	3.60 U	3.80 B
POTASSIUM	MG/KG		178.00 B	110.00 U	91.70 U	436.00 B
SELENIUM	MG/KG		10.61 B	0.47 JB	0.40 UJ	0.90 B
SILVER	MG/KG		0.63 U	0.56 U	0.63 U	0.61 U
SODIUM	MG/KG		65.90 U	40.60 U	47.10 U	123.00 U
THALLIUM	MG/KG		0.60 U	0.56 U	0.60 U	0.59 U
VANADIUM	MG/KG		12.40	4.90 B	5.10 B	17.70 B
ZINC	MG/KG		87.80	1.60 U	2.80 U	5.40 U

DATA SUMMARY
REMEDIAL INVESTIGATION CTO-0133
MCB CAMP LEJEUNE, NORTH CAROLINA
CASE No. 19133 SDG No. W30D02

		Location: 6-TP5-02D	6-TP7-02
		Depth: DUP TP502	N/A
		Date Sampled: 3/3/93	3/3/93
		Lab Id: 30095-14	30095-15
ALUMINUM	MG/KG	3980.00 J	2180.00
ANTIMONY	MG/KG	4.30 UR	5.10 UR
ARSENIC	MG/KG	2.20	3.50
BARIUM	MG/KG	27.10 B	59.50
BERYLLIUM	MG/KG	0.20 U	0.23 U
CADMIUM	MG/KG	0.59 U	0.70 U
CALCIUM	MG/KG	670.00 B	324.00 B
CHROMIUM	MG/KG	3.90	1.50 B
COBALT	MG/KG	0.59 U	0.70 U
COPPER	MG/KG	1.50 JB	3.00 B
IRON	MG/KG	3250.00 J	7200.00
LEAD	MG/KG	5.30 J	133.00
MAGNESIUM	MG/KG	[illegible]	[illegible]
MANGANESE	MG/KG	10.50	12.60
MERCURY	MG/KG	0.05 U	0.05 U
NICKEL	MG/KG	3.30 U	4.00 U
POTASSIUM	MG/KG	263.00 B	173.00 B
SELENIUM	MG/KG	0.96 B	3.30
SILVER	MG/KG	0.59 U	0.70 U
SODIUM	MG/KG	71.70 U	239.00 U
THALLIUM	MG/KG	0.67 U	0.66 U
VANADIUM	MG/KG	8.50 B	3.60 B
ZINC	MG/KG	2.40 U	4.50 U

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162111
LAB #: A2K120024-001
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATC
Benzene	ND	0.005	SW846 8240	11/18/92	32303
Methyl ethyl ketone	ND	0.05	SW846 8240	11/18/92	32303
Carbon tetrachloride	ND	0.005	SW846 8240	11/18/92	32303
Chlorobenzene	ND	0.005	SW846 8240	11/18/92	32303
Chloroform	ND	0.005	SW846 8240	11/18/92	32303
1,2-Dichloroethane	ND	0.005	SW846 8240	11/18/92	32303
1,1-Dichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Tetrachlorethylene	ND	0.005	SW846 8240	11/18/92	32303
Trichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Vinyl chloride	ND	0.01	SW846 8240	11/18/92	32303

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	86	(76 - 114)
Toluene-d8	101	(88 - 110)
Bromofluorobenzene	104	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162112
LAB #: A2K120024-001
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobutadiene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachloroethane	ND	0.04	SW846 8270	11/19-11/24/92	324013
Nitrobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Pentachlorophenol	ND	0.2	SW846 8270	11/19-11/24/92	324013
Pyridine	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
Cresols, Total	ND	0.04	SW846 8270	11/19-11/24/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	89	(35 - 114)
2-Fluorobiphenyl	69	(43 - 116)
Terphenyl-d14	101	(33 - 141)
2-Fluorophenol	68	(21 - 100)
Phenol-d5	54	(10 - 94)
2,4,6-Tribromophenol	70	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162212
LAB #: A2K120024-001 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/29-12/02/92	233400
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Hexachlorobenzene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Hexachlorobutadiene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Hexachloroethane	ND	0.04	SW846 8270	11/29-12/02/92	233400
Nitrobenzene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Pentachlorophenol	ND	0.2	SW846 8270	11/29-12/02/92	233400
Pyridine	ND	0.04	SW846 8270	11/29-12/02/92	233400
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/29-12/02/92	233400
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/29-12/02/92	233400
Cresols, Total	ND	0.04	SW846 8270	11/29-12/02/92	233400

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	96	(35 - 114)
2-Fluorobiphenyl	71	(43 - 116)
Terphenyl-d14	121	(33 - 141)
2-Fluorophenol	92	(21 - 100)
Phenol-d5	62	(10 - 94)
2,4,6-Tribromophenol	87	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162110
LAB #: A2K120024-001
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Chlordane	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Endrin	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Heptachlor	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Heptachlor epoxide	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Methoxychlor	ND	0.001	SW846 8080	11/19-11/21/92	324011
Toxaphene	ND	0.005	SW846 8080	11/19-11/21/92	324011

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	62	(24 - 154)
Tetrachloro-m-xylene	63	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162109
LAB #: A2K120024-001 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	73	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162
LAB #: A2K120024-001
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:6.4

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	322053
Barium	ND	1.0	mg/L	SW846 6010	11/17-12/04/92	322053
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Lead	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/04/92	322053
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	322053

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B01 11-9-92 0845

WO #: A2162
LAB #: A2K120024-001
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	233803
pH Non-Aqueous	5		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	1.2	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164111
LAB #: A2K120024-002
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - TCLP VOLATILE ORGANICS - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	0.005	SW846 8240	11/18/92	323033
Methyl ethyl ketone	ND	0.05	SW846 8240	11/18/92	323033
Carbon tetrachloride	ND	0.005	SW846 8240	11/18/92	323033
Chlorobenzene	ND	0.005	SW846 8240	11/18/92	323033
Chloroform	ND	0.005	SW846 8240	11/18/92	323033
1,2-Dichloroethane	ND	0.005	SW846 8240	11/18/92	323033
1,1-Dichloroethylene	ND	0.005	SW846 8240	11/18/92	323033
Tetrachlorethylene	ND	0.005	SW846 8240	11/18/92	323033
Trichloroethylene	ND	0.005	SW846 8240	11/18/92	323033
Vinyl chloride	ND	0.01	SW846 8240	11/18/92	323033

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	87	(76 - 114)
Toluene-d8	101	(88 - 110)
Bromofluorobenzene	102	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164112
LAB #: A2K120024-002 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobutadiene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachloroethane	ND	0.04	SW846 8270	11/19-11/24/92	324013
Nitrobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Pentachlorophenol	ND	0.2	SW846 8270	11/19-11/24/92	324013
Pyridine	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
Cresols, Total	ND	0.04	SW846 8270	11/19-11/24/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	84	(35 - 114)
2-Fluorobiphenyl	69	(43 - 116)
Terphenyl-d14	95	(33 - 141)
2-Fluorophenol	63	(21 - 100)
Phenol-d5	49	(10 - 94)
2,4,6-Tribromophenol	72	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164212
LAB #: A2K120024-002 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 12/01/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	12/02-12/04/92	233700
2,4-Dinitrotoluene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Hexachlorobenzene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Hexachlorobutadiene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Hexachloroethane	ND	0.04	SW846 8270	12/02-12/04/92	233700
Nitrobenzene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Pentachlorophenol	ND	0.2	SW846 8270	12/02-12/04/92	233700
Pyridine	ND	0.04	SW846 8270	12/02-12/04/92	233700
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	12/02-12/04/92	233700
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	12/02-12/04/92	233700
Cresols, Total	ND	0.04	SW846 8270	12/02-12/04/92	233700

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	105	(35 - 114)
2-Fluorobiphenyl	74	(43 - 116)
Terphenyl-d14	114	(33 - 141)
2-Fluorophenol	84	(21 - 100)
Phenol-d5	59	(10 - 94)
2,4,6-Tribromophenol	95	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)
INSUFFICIENT SAMPLE TO RE-EXTRACT.

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164110
LAB #: A2K120024-002 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0001	SW846 8080	11/19-11/21/92	32401
Chlordane	ND	0.0005	SW846 8080	11/19-11/21/92	32401
Endrin	ND	0.0005	SW846 8080	11/19-11/21/92	32401
Heptachlor	ND	0.0001	SW846 8080	11/19-11/21/92	32401
Heptachlor epoxide	ND	0.0001	SW846 8080	11/19-11/21/92	32401
Methoxychlor	ND	0.001	SW846 8080	11/19-11/21/92	32401
Toxaphene	ND	0.005	SW846 8080	11/19-11/21/92	32401

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	34	(24 - 154)
Tetrachloro-m-xylene	64	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)
UNKNOWN HYDROCARBON PATTERN.

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164109
LAB #: A2K120024-002 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	68	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164
LAB #: A2K120024-002
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:6.4

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	32205
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	32205
Barium	ND	1.0	mg/L	SW846 6010	11/17-12/04/92	32205
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	32205
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	32205
Lead	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	32205
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/04/92	32205
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	32205

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B02 11-9-92 0900

WO #: A2164
LAB #: A2K120024-002
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	233803
pH Non-Aqueous	5		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	ND	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166111
LAB #: A2K120024-003 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATC
Benzene	ND	0.005	SW846 8240	11/18/92	32303
Methyl ethyl ketone	ND	0.05	SW846 8240	11/18/92	32303
Carbon tetrachloride	ND	0.005	SW846 8240	11/18/92	32303
Chlorobenzene	ND	0.005	SW846 8240	11/18/92	32303
Chloroform	ND	0.005	SW846 8240	11/18/92	32303
1,2-Dichloroethane	ND	0.005	SW846 8240	11/18/92	32303
1,1-Dichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Tetrachlorethylene	ND	0.005	SW846 8240	11/18/92	32303
Trichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Vinyl chloride	ND	0.01	SW846 8240	11/18/92	32303

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	88	(76 - 114)
Toluene-d8	101	(88 - 110)
Bromofluorobenzene	103	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166112
LAB #: A2K120024-003
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobutadiene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachloroethane	ND	0.04	SW846 8270	11/19-11/24/92	324013
Nitrobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Pentachlorophenol	ND	0.2	SW846 8270	11/19-11/24/92	324013
Pyridine	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
Cresols, Total	ND	0.04	SW846 8270	11/19-11/24/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	83	(35 - 114)
2-Fluorobiphenyl	65	(43 - 116)
Terphenyl-d14	82	(33 - 141)
2-Fluorophenol	71	(21 - 100)
Phenol-d5	57	(10 - 94)
2,4,6-Tribromophenol	77	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166212
LAB #: A2K120024-003 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 12/01/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	12/02-12/04/92	233700
2,4-Dinitrotoluene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Hexachlorobenzene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Hexachlorobutadiene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Hexachloroethane	ND	0.04	SW846 8270	12/02-12/04/92	233700
Nitrobenzene	ND	0.04	SW846 8270	12/02-12/04/92	233700
Pentachlorophenol	ND	0.2	SW846 8270	12/02-12/04/92	233700
Pyridine	ND	0.04	SW846 8270	12/02-12/04/92	233700
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	12/02-12/04/92	233700
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	12/02-12/04/92	233700
Cresols, Total	ND	0.04	SW846 8270	12/02-12/04/92	233700

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	107	(35 - 114)
2-Fluorobiphenyl	73	(43 - 116)
Terphenyl-d14	106	(33 - 141)
2-Fluorophenol	85	(21 - 100)
Phenol-d5	62	(10 - 94)
2,4,6-Tribromophenol	109	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)
INSUFFICIENT SAMPLE TO RE-EXTRACT.

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166110
LAB #: A2K120024-003
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Chlordane	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Endrin	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Heptachlor	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Heptachlor epoxide	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Methoxychlor	ND	0.001	SW846 8080	11/19-11/21/92	324011
Toxaphene	ND	0.005	SW846 8080	11/19-11/21/92	324011

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	41	(24 - 154)
Tetrachloro-m-xylene	70	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)
UNKNOWN HYDROCARBON PATTERN.

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166109
LAB #: A2K120024-003 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	33*	(48 - 131)

TE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166
LAB #: A2K120024-003
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:6.5

- RCRA METALS -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	322053
Barium	ND	1.0	mg/L	SW846 6010	11/17-12/04/92	322053
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Lead	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/04/92	322053
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	322053

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B03 11-9-92 0915

WO #: A2166
LAB #: A2K120024-003
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	233803
pH Non-Aqueous	6		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	ND	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168111
LAB #: A2K120024-004 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	0.005	SW846 8240	11/18/92	32303
Methyl ethyl ketone	ND	0.05	SW846 8240	11/18/92	32303
Carbon tetrachloride	ND	0.005	SW846 8240	11/18/92	32303
Chlorobenzene	ND	0.005	SW846 8240	11/18/92	32303
Chloroform	ND	0.005	SW846 8240	11/18/92	32303
1,2-Dichloroethane	ND	0.005	SW846 8240	11/18/92	32303
1,1-Dichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Tetrachlorethylene	ND	0.005	SW846 8240	11/18/92	32303
Trichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Vinyl chloride	ND	0.01	SW846 8240	11/18/92	32303

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	89	(76 - 114)
Toluene-d8	101	(88 - 110)
Bromofluorobenzene	103	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168112
LAB #: A2K120024-004 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobutadiene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachloroethane	ND	0.04	SW846 8270	11/19-11/24/92	324013
Nitrobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Pentachlorophenol	ND	0.2	SW846 8270	11/19-11/24/92	324013
Pyridine	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
Cresols, Total	ND	0.04	SW846 8270	11/19-11/24/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	86	(35 - 114)
2-Fluorobiphenyl	64	(43 - 116)
Terphenyl-d14	117	(33 - 141)
2-Fluorophenol	73	(21 - 100)
Phenol-d5	58	(10 - 94)
2,4,6-Tribromophenol	82	(10 - 123)

NOTE: AS RECEIVED)
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168212
LAB #: A2K120024-004 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 12/01/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	12/02-12/05/92	233700
2,4-Dinitrotoluene	ND	0.04	SW846 8270	12/02-12/05/92	233700
Hexachlorobenzene	ND	0.04	SW846 8270	12/02-12/05/92	233700
Hexachlorobutadiene	ND	0.04	SW846 8270	12/02-12/05/92	233700
Hexachloroethane	ND	0.04	SW846 8270	12/02-12/05/92	233700
Nitrobenzene	ND	0.04	SW846 8270	12/02-12/05/92	233700
Pentachlorophenol	0.01 J	0.2	SW846 8270	12/02-12/05/92	233700
Pyridine	ND	0.04	SW846 8270	12/02-12/05/92	233700
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	12/02-12/05/92	233700
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	12/02-12/05/92	233700
Cresols, Total	ND	0.04	SW846 8270	12/02-12/05/92	233700

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	86	(35 - 114)
2-Fluorobiphenyl	60	(43 - 116)
Terphenyl-d14	83	(33 - 141)
2-Fluorophenol	90	(21 - 100)
Phenol-d5	63	(10 - 94)
2,4,6-Tribromophenol	96	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)
INSUFFICIENT SAMPLE TO RE-EXTRACT.
J (DETECTED, BUT BELOW QUANTITATION LIMIT; ESTIMATED VALUE)

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168110
LAB #: A2K120024-004 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Chlordane	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Endrin	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Heptachlor	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Heptachlor epoxide	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Methoxychlor	ND	0.001	SW846 8080	11/19-11/21/92	324011
Toxaphene	ND	0.005	SW846 8080	11/19-11/21/92	324011

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	51	(24 - 154)
Tetrachloro-m-xylene	60	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)
UNKNOWN HYDROCARBON PATTERN.

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168109
LAB #: A2K120024-004 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	90	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168
LAB #: A2K120024-004
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:7.1

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	322053
Barium	ND	1.0	mg/L	SW846 6010	11/17-12/04/92	322053
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Lead	1.3	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/04/92	322053
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	322053

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B04 11-9-92 0930

WO #: A2168
LAB #: A2K120024-004
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	6		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	ND	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171111
LAB #: A2K120024-005 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATC
Benzene	ND	0.005	SW846 8240	11/18/92	32303
Methyl ethyl ketone	ND	0.05	SW846 8240	11/18/92	32303
Carbon tetrachloride	ND	0.005	SW846 8240	11/18/92	32303
Chlorobenzene	ND	0.005	SW846 8240	11/18/92	32303
Chloroform	ND	0.005	SW846 8240	11/18/92	32303
1,2-Dichloroethane	ND	0.005	SW846 8240	11/18/92	32303
1,1-Dichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Tetrachlorethylene	ND	0.005	SW846 8240	11/18/92	32303
Trichloroethylene	ND	0.005	SW846 8240	11/18/92	32303
Vinyl chloride	ND	0.01	SW846 8240	11/18/92	32303

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	95	(76 - 114)
Toluene-d8	102	(88 - 110)
Bromofluorobenzene	102	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171112
LAB #: A2K120024-005 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.4	SW846 8270	11/19-11/25/92	324013
2,4-Dinitrotoluene	ND	0.4	SW846 8270	11/19-11/25/92	324013
Hexachlorobenzene	ND	0.4	SW846 8270	11/19-11/25/92	324013
Hexachlorobutadiene	ND	0.4	SW846 8270	11/19-11/25/92	324013
Hexachloroethane	ND	0.4	SW846 8270	11/19-11/25/92	324013
Nitrobenzene	ND	0.4	SW846 8270	11/19-11/25/92	324013
Pentachlorophenol	ND	2.0	SW846 8270	11/19-11/25/92	324013
Pyridine	ND	0.4	SW846 8270	11/19-11/25/92	324013
2,4,5-Trichlorophenol	ND	0.4	SW846 8270	11/19-11/25/92	324013
2,4,6-Trichlorophenol	ND	0.4	SW846 8270	11/19-11/25/92	324013
Cresols, Total	ND	0.4	SW846 8270	11/19-11/25/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	DIL	(35 - 114)
2-Fluorobiphenyl	DIL	(43 - 116)
Terphenyl-d14	DIL	(33 - 141)
2-Fluorophenol	DIL	(21 - 100)
Phenol-d5	DIL	(10 - 94)
2,4,6-Tribromophenol	DIL	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)
ELEVATED DETECTION LIMITS DUE TO TICS.

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171212
LAB #: A2K120024-005
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	1.2	SW846 8270	11/29-12/02/92	233400
2,4-Dinitrotoluene	ND	1.2	SW846 8270	11/29-12/02/92	233400
Hexachlorobenzene	ND	1.2	SW846 8270	11/29-12/02/92	233400
Hexachlorobutadiene	ND	1.2	SW846 8270	11/29-12/02/92	233400
Hexachloroethane	ND	1.2	SW846 8270	11/29-12/02/92	233400
Nitrobenzene	ND	1.2	SW846 8270	11/29-12/02/92	233400
Pentachlorophenol	ND	6.0	SW846 8270	11/29-12/02/92	233400
Pyridine	ND	1.2	SW846 8270	11/29-12/02/92	233400
2,4,5-Trichlorophenol	ND	1.2	SW846 8270	11/29-12/02/92	233400
2,4,6-Trichlorophenol	ND	1.2	SW846 8270	11/29-12/02/92	233400
Cresols, Total	ND	1.2	SW846 8270	11/29-12/02/92	233400

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	DIL	(35 - 114)
2-Fluorobiphenyl	DIL	(43 - 116)
Terphenyl-d14	DIL	(33 - 141)
2-Fluorophenol	DIL	(21 - 100)
Phenol-d5	DIL	(10 - 94)
2,4,6-Tribromophenol	DIL	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)
ELEVATED DETECTION LIMITS DUE TO TICS.

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171110
LAB #: A2K120024-005 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Chlordane	ND	0.0006	SW846 8080	11/19-11/21/92	324011
Endrin	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Heptachlor	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Heptachlor epoxide	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Methoxychlor	ND	0.001	SW846 8080	11/19-11/21/92	324011
Toxaphene	ND	0.006	SW846 8080	11/19-11/21/92	324011

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	26	(24 - 154)
Tetrachloro-m-xylene	22*	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)
UNKNOWN HYDROCARBON PEAKS. ELEVATED DETECTION LIMITS DUE TO MATRIX INTERFERENCE.

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171109
LAB #: A2K120024-005 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	93	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171
LAB #: A2K120024-005
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:4.9

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	322053
Barium	ND	1.0	mg/L	SW846 6010	11/17-12/04/92	322053
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Lead	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/04/92	322053
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	322053

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B05 11-9-92 0945

WO #: A2171
LAB #: A2K120024-005
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	233803
pH Non-Aqueous	4		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	78	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B06 11-9-92 1000

WO #: A1972111
LAB #: A2K110027-004
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	5	SW846 8240	11/16/92	321041
Methyl ethyl ketone	ND	50	SW846 8240	11/16/92	321041
Carbon tetrachloride	ND	5	SW846 8240	11/16/92	321041
Chlorobenzene	ND	5	SW846 8240	11/16/92	321041
Chloroform	ND	5	SW846 8240	11/16/92	321041
1,2-Dichloroethane	ND	5	SW846 8240	11/16/92	321041
1,1-Dichloroethene	ND	5	SW846 8240	11/16/92	321041
Tetrachloroethene	ND	5	SW846 8240	11/16/92	321041
Trichloroethene	ND	5	SW846 8240	11/16/92	321041
Vinyl chloride	ND	10	SW846 8240	11/16/92	321041

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	93	(76 - 114)
Toluene-d8	101	(88 - 110)
Bromofluorobenzene	101	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)
ELEVATED DETECTION LIMITS DUE TO TIC(S).

BAKER ENVIRONMENTAL INC

6-B06 11-9-92 1000

WO #: A1972111
LAB #: A2K110027-004
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
DATE EXTRACTED: 11/16/92
DATE ANALYZED: 11/16/92

TCLP VOLATILE ORGANICS

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS
with their estimated concentrations

PARAMETER	RESULT	UNIT
Methylene chloride	1,200	mg/L

OTHER COMPOUNDS

PARAMETER	RESULT	UNIT
None		--

BAKER ENVIRONMENTAL INC

6-B06 11-9-92 1000

WO #: A1972112
LAB #: A2K110027-004 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	8	SW846 8270	11/16-11/20/92	321028
2,4-Dinitrotoluene	ND	8	SW846 8270	11/16-11/20/92	321028
Hexachlorobenzene	ND	8	SW846 8270	11/16-11/20/92	321028
Hexachlorobutadiene	ND	8	SW846 8270	11/16-11/20/92	321028
Hexachloroethane	ND	8	SW846 8270	11/16-11/20/92	321028
Nitrobenzene	ND	8	SW846 8270	11/16-11/20/92	321028
Pentachlorophenol	ND	40	SW846 8270	11/16-11/20/92	321028
Pyridine	ND	8	SW846 8270	11/16-11/20/92	321028
2,4,5-Trichlorophenol	ND	8	SW846 8270	11/16-11/20/92	321028
2,4,6-Trichlorophenol	ND	8	SW846 8270	11/16-11/20/92	321028
Cresols, Total	ND	8	SW846 8270	11/16-11/20/92	321028

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	DIL	(35 - 114)
2-Fluorobiphenyl	DIL	(43 - 116)
Terphenyl-d14	DIL	(33 - 141)
2-Fluorophenol	DIL	(21 - 100)
Phenol-d5	DIL	(10 - 94)
2,4,6-Tribromophenol	DIL	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)
ELAVATED DETECTION LIMITS DUE TO TICS.

BAKER ENVIRONMENTAL INC

6-B06 11-9-92 1000

WO #: A1972110
LAB #: A2K110027-004 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
gamma-BHC (Lindane)	ND	0.0001	SW846 8080	11/16-11/24/92	321027
Chlordane	ND	0.0006	SW846 8080	11/16-11/24/92	321027
Endrin	ND	0.0005	SW846 8080	11/16-11/24/92	321027
Heptachlor	ND	0.0001	SW846 8080	11/16-11/24/92	321027
Heptachlor epoxide	ND	0.0001	SW846 8080	11/16-11/24/92	321027
Methoxychlor	ND	0.001	SW846 8080	11/16-11/24/92	321027
Toxaphene	ND	0.006	SW846 8080	11/16-11/24/92	321027

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	24	(24 - 154)
Tetrachloro-m-xylene	24*	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)
UNKNOWN HYDROCARBON PATTERN. ELEVATED DETECTION LIMITS DUE TO MATRIX INTERFERENCE.

BAKER ENVIRONMENTAL INC

6-B06 11-9-92 1000

WO #: A1972109
LAB #: A2K110027-004
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATC
2,4-D	ND	0.5	SW846 8150	11/14-11/16/92	31900
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/14-11/16/92	31900

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	48	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

5-B06 11-9-92 1000

WO #: A1972
LAB #: A2K110027-004
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92
FINAL PH:5.0

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/13-11/20/92	31803(
Arsenic	ND	0.5	mg/L	SW846 6010	11/13-11/20/92	31803(
Barium	ND	1.0	mg/L	SW846 6010	11/13-11/20/92	31803(
Cadmium	ND	0.1	mg/L	SW846 6010	11/13-11/20/92	31803(
Chromium	ND	0.1	mg/L	SW846 6010	11/13-11/20/92	31803(
Lead	ND	0.1	mg/L	SW846 6010	11/13-11/20/92	31803(
Selenium	ND	0.3	mg/L	SW846 6010	11/13-11/20/92	31803(
Mercury	ND	0.02	mg/L	SW846 7471	11/13-11/18/92	31803(

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B06 11-9-92 1000

WO #: A1972
LAB #: A2K110027-004
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	5		su	SW846 9045	11/11/92	316057
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	1.7	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173111
LAB #: A2K120024-006 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	0.01	SW846 8240	11/18/92	323033
Methyl ethyl ketone	ND	0.1	SW846 8240	11/18/92	323033
Carbon tetrachloride	ND	0.01	SW846 8240	11/18/92	323033
Chlorobenzene	ND	0.01	SW846 8240	11/18/92	323033
Chloroform	ND	0.01	SW846 8240	11/18/92	323033
1,2-Dichloroethane	ND	0.01	SW846 8240	11/18/92	323033
1,1-Dichloroethylene	ND	0.01	SW846 8240	11/18/92	323033
Tetrachlorethylene	ND	0.01	SW846 8240	11/18/92	323033
Trichloroethylene	ND	0.01	SW846 8240	11/18/92	323033
Vinyl chloride	ND	0.02	SW846 8240	11/18/92	323033

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	88	(76 - 114)
Toluene-d8	99	(88 - 110)
Bromofluorobenzene	99	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173112
LAB #: A2K120024-006 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/19-11/24/32	324013
Hexachlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobutadiene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachloroethane	ND	0.04	SW846 8270	11/19-11/24/92	324013
Nitrobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Pentachlorophenol	ND	0.2	SW846 8270	11/19-11/24/92	324013
Pyridine	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
Cresols, Total	0.06	0.04	SW846 8270	11/19-11/24/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	94	(35 - 114)
2-Fluorobiphenyl	72	(43 - 116)
Terphenyl-d14	78	(33 - 141)
2-Fluorophenol	74	(21 - 100)
Phenol-d5	60	(10 - 94)
2,4,6-Tribromophenol	80	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173212
LAB #: A2K120024-006
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/29-12/02/92	233400
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Hexachlorobenzene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Hexachlorobutadiene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Hexachloroethane	ND	0.04	SW846 8270	11/29-12/02/92	233400
Nitrobenzene	ND	0.04	SW846 8270	11/29-12/02/92	233400
Pentachlorophenol	ND	0.2	SW846 8270	11/29-12/02/92	233400
Pyridine	ND	0.04	SW846 8270	11/29-12/02/92	233400
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/29-12/02/92	233400
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/29-12/02/92	233400
Cresols, Total	0.05	0.04	SW846 8270	11/29-12/02/92	233400

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	93	(35 - 114)
2-Fluorobiphenyl	81	(43 - 116)
Terphenyl-d14	105	(33 - 141)
2-Fluorophenol	93	(21 - 100)
Phenol-d5	96	(10 - 94)
2,4,6-Tribromophenol	115	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173110
LAB #: A2K120024-006 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0006	SW846 8080	11/19-11/24/92	324011
Chlordane	ND	0.003	SW846 8080	11/19-11/24/92	324011
Endrin	ND	0.001	SW846 8080	11/19-11/24/92	324011
Heptachlor	ND	0.0006	SW846 8080	11/19-11/24/92	324011
Heptachlor epoxide	ND	0.0006	SW846 8080	11/19-11/24/92	324011
Methoxychlor	ND	0.006	SW846 8080	11/19-11/24/92	324011
Toxaphene	ND	0.03	SW846 8080	11/19-11/24/92	324011

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	81	(24 - 154)
Tetrachloro-m-xylene	64	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)
ELEVATED DETECTION LIMITS DUE TO MATRIX INTERFERENCE

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173109
LAB #: A2K120024-006
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	MI	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173
LAB #: A2K120024-006
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:5.0

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	322053
Barium	1.5	1.0	mg/L	SW846 6010	11/17-12/04/92	322053
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Lead	0.2	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/08/92	322053
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	322053

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B07 11-9-92 1400

WO #: A2173
LAB #: A2K120024-006
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	4		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/16/92	321034
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/16/92	321035
Solids, Total (TS)	99	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B08 11-9-92 1430

WO #: A1968111
LAB #: A2K110027-001
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	2.5	SW846 8240	11/16/92	321041
Methyl ethyl ketone	59	25	SW846 8240	11/16/92	321041
Carbon tetrachloride	ND	2.5	SW846 8240	11/16/92	321041
Chlorobenzene	ND	2.5	SW846 8240	11/16/92	321041
Chloroform	ND	2.5	SW846 8240	11/16/92	321041
1,2-Dichloroethane	ND	2.5	SW846 8240	11/16/92	321041
1,1-Dichloroethene	ND	2.5	SW846 8240	11/16/92	321041
Tetrachloroethene	ND	2.5	SW846 8240	11/16/92	321041
Trichloroethene	ND	2.5	SW846 8240	11/16/92	321041
Vinyl chloride	ND	5	SW846 8240	11/16/92	321041

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	95	(76 - 114)
Toluene-d8	99	(88 - 110)
Bromofluorobenzene	102	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B08 11-9-92 1430

WO #: A1968112
LAB #: A2K110027-001 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/16-11/20/92	321028
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/16-11/20/92	321028
Hexachlorobenzene	ND	0.04	SW846 8270	11/16-11/20/92	321028
Hexachlorobutadiene	ND	0.04	SW846 8270	11/16-11/20/92	321028
Hexachloroethane	ND	0.04	SW846 8270	11/16-11/20/92	321028
Nitrobenzene	ND	0.04	SW846 8270	11/16-11/20/92	321028
Pentachlorophenol	ND	0.2	SW846 8270	11/16-11/20/92	321028
Pyridine	ND	0.04	SW846 8270	11/16-11/20/92	321028
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/16-11/20/92	321028
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/16-11/20/92	321028
Cresols, Total	ND	0.04	SW846 8270	11/16-11/20/92	321028

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	79	(35 - 114)
2-Fluorobiphenyl	68	(43 - 116)
Terphenyl-d14	102	(33 - 141)
2-Fluorophenol	76	(21 - 100)
Phenol-d5	67	(10 - 94)
2,4,6-Tribromophenol	86	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B08 11-9-92 1430

WO #: A1968110
LAB #: A2K110027-001 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
gamma-BHC (Lindane)	ND	0.0001	SW846 8080	11/16-11/20/92	321027
Chlordane	ND	0.0005	SW846 8080	11/16-11/20/92	321027
Endrin	ND	0.0005	SW846 8080	11/16-11/20/92	321027
Heptachlor	ND	0.0001	SW846 8080	11/16-11/20/92	321027
Heptachlor epoxide	ND	0.0001	SW846 8080	11/16-11/20/92	321027
Methoxychlor	ND	0.001	SW846 8080	11/16-11/20/92	321027
Toxaphene	ND	0.005	SW846 8080	11/16-11/20/92	321027

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	63	(24 - 154)
Tetrachloro-m-xylene	64	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B08 11-9-92 1430

WO #: A1968109
LAB #: A2K110027-001 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/14-11/16/92	319002
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/14-11/16/92	319002

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	80	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B08 11-9-92 1430

WO #: A1968
LAB #: A2K110027-001
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92
FINAL PH:5.0

- RCRA METALS -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/13-11/19/92	318030
Arsenic	ND	0.5	mg/L	SW846 6010	11/13-11/19/92	318030
Barium	ND	1.0	mg/L	SW846 6010	11/13-11/19/92	318030
Cadmium	ND	0.1	mg/L	SW846 6010	11/13-11/19/92	318030
Chromium	ND	0.1	mg/L	SW846 6010	11/13-11/19/92	318030
Lead	ND	0.1	mg/L	SW846 6010	11/13-11/19/92	318030
Selenium	ND	0.3	mg/L	SW846 6010	11/13-11/19/92	318030
Mercury	ND	0.02	mg/L	SW846 7471	11/13-11/18/92	318030

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B08 11-9-92 1430

WO #: A1968
LAB #: A2K110027-001
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	DNF		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	5		su	SW846 9045	11/11/92	316057
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	80	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)
DOES NOT FLASH, BURNS AT 140 DEG F.

BAKER ENVIRONMENTAL INC

6-B09 11-9-92 1500

WO #: A1970111
LAB #: A2K110027-002
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92

TCLP VOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	0.005	SW846 8240	11/16/92	321041
Methyl ethyl ketone	ND	0.05	SW846 8240	11/16/92	321041
Carbon tetrachloride	ND	0.005	SW846 8240	11/16/92	321041
Chlorobenzene	ND	0.005	SW846 8240	11/16/92	321041
Chloroform	ND	0.005	SW846 8240	11/16/92	321041
1,2-Dichloroethane	ND	0.005	SW846 8240	11/16/92	321041
1,1-Dichloroethene	ND	0.005	SW846 8240	11/16/92	321041
Tetrachloroethene	ND	0.005	SW846 8240	11/16/92	321041
Trichloroethene	ND	0.005	SW846 8240	11/16/92	321041
Vinyl chloride	ND	0.01	SW846 8240	11/16/92	321041

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	102	(76 - 114)
Toluene-d8	100	(88 - 110)
Bromofluorobenzene	100	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B09 11-9-92 1500

WO #: A1970112
LAB #: A2K110027-002 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/16-11/19/92	321030
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/16-11/19/92	321030
Hexachlorobenzene	ND	0.04	SW846 8270	11/16-11/19/92	321030
Hexachlorobutadiene	ND	0.04	SW846 8270	11/16-11/19/92	321030
Hexachloroethane	ND	0.04	SW846 8270	11/16-11/19/92	321030
Nitrobenzene	ND	0.04	SW846 8270	11/16-11/19/92	321030
Pentachlorophenol	ND	0.2	SW846 8270	11/16-11/19/92	321030
Pyridine	ND	0.04	SW846 8270	11/16-11/19/92	321030
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/16-11/19/92	321030
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/16-11/19/92	321030
Cresols, Total	ND	0.04	SW846 8270	11/16-11/19/92	321030

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	75	(35 - 114)
2-Fluorobiphenyl	68	(43 - 116)
Terphenyl-d14	73	(33 - 141)
2-Fluorophenol	78	(21 - 100)
Phenol-d5	66	(10 - 94)
2,4,6-Tribromophenol	49	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B09 11-9-92 1500

WO #: A1970110
LAB #: A2K110027-002 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

- - - - - - - - - - - - - - - - - - TCLP PESTICIDES - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
gamma-BHC (Lindane)	ND	0.0001	SW846 8080	11/16-11/18/92	321029
Chlordane	ND	0.0005	SW846 8080	11/16-11/18/92	321029
Endrin	ND	0.0005	SW846 8080	11/16-11/18/92	321029
Heptachlor	ND	0.0001	SW846 8080	11/16-11/18/92	321029
Heptachlor epoxide	ND	0.0001	SW846 8080	11/16-11/18/92	321029
Methoxychlor	ND	0.001	SW846 8080	11/16-11/18/92	321029
Toxaphene	ND	0.005	SW846 8080	11/16-11/18/92	321029

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	63	(24 - 154)
Tetrachloro-m-xylene	68	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B09 11-9-92 1500

WO #: A1970109
LAB #: A2K110027-002 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/14-11/18/92	319001
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/14-11/18/92	319001

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	93	(48 - 131)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B09 11-9-92 1500

WO #: A1970
LAB #: A2K110027-002
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92
FINAL PH:10.0

- RCRA METALS -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Arsenic	ND	0.5	mg/L	SW846 6010	11/13-12/03/92	318028
Barium	ND	1.0	mg/L	SW846 6010	11/13-12/03/92	318028
Cadmium	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Chromium	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Lead	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Selenium	ND	0.3	mg/L	SW846 6010	11/13-12/03/92	318028
Mercury	ND	0.02	mg/L	SW846 7471	11/23-12/01/92	328046

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B09 11-9-92 1500

WO #: A1970
LAB #: A2K110027-002
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	13		su	SW846 9045	11/11/92	316057
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/13/92	321009
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	74	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B10 11-9-92 1530

WO #: A1971111
LAB #: A2K110027-003
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92

- - - - - - - - - - - - - - - - TCLP VOLATILE ORGANICS - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	0.62	SW846 8240	11/16/92	321041
Methyl ethyl ketone	ND	6.2	SW846 8240	11/16/92	321041
Carbon tetrachloride	ND	0.62	SW846 8240	11/16/92	321041
Chlorobenzene	ND	0.62	SW846 8240	11/16/92	321041
Chloroform	15	0.62	SW846 8240	11/16/92	321041
1,2-Dichloroethane	ND	0.62	SW846 8240	11/16/92	321041
1,1-Dichloroethene	ND	0.62	SW846 8240	11/16/92	321041
Tetrachloroethene	ND	0.62	SW846 8240	11/16/92	321041
Trichloroethene	ND	0.62	SW846 8240	11/16/92	321041
Vinyl chloride	ND	1.2	SW846 8240	11/16/92	321041

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	89	(76 - 114)
Toluene-d8	102	(88 - 110)
Bromofluorobenzene	102	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B10 11-9-92 1530

WO #: A1971212
LAB #: A2K110027-003 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/20-11/24/92	325012
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/20-11/24/92	325012
Hexachlorobenzene	ND	0.04	SW846 8270	11/20-11/24/92	325012
Hexachlorobutadiene	ND	0.04	SW846 8270	11/20-11/24/92	325012
Hexachloroethane	ND	0.04	SW846 8270	11/20-11/24/92	325012
Nitrobenzene	ND	0.04	SW846 8270	11/20-11/24/92	325012
Pentachlorophenol	ND	0.2	SW846 8270	11/20-11/24/92	325012
Pyridine	ND	0.04	SW846 8270	11/20-11/24/92	325012
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/20-11/24/92	325012
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/20-11/24/92	325012
Cresols, Total	0.04	0.04	SW846 8270	11/20-11/24/92	325012

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	83	(35 - 114)
2-Fluorobiphenyl	61	(43 - 116)
Terphenyl-d14	74	(33 - 141)
2-Fluorophenol	68	(21 - 100)
Phenol-d5	54	(10 - 94)
2,4,6-Tribromophenol	72	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B10 11-9-92 1530

WO #: A1971110
LAB #: A2K110027-003 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
gamma-BHC (Lindane)	ND	0.0001	SW846 8080	11/16-11/20/92	321029
Chlordane	ND	0.0005	SW846 8080	11/16-11/20/92	321029
Endrin	ND	0.0005	SW846 8080	11/16-11/20/92	321029
Heptachlor	ND	0.0001	SW846 8080	11/16-11/20/92	321029
Heptachlor epoxide	ND	0.0001	SW846 8080	11/16-11/20/92	321029
Methoxychlor	ND	0.001	SW846 8080	11/16-11/20/92	321029
Toxaphene	ND	0.005	SW846 8080	11/16-11/20/92	321029

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	46	(24 - 154)
Tetrachloro-m-xylene	27*	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B10 11-9-92 1530

WO #: A1971109
LAB #: A2K110027-003 DATE RECEIVED: 11/11/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/13/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/14-11/18/92	319001
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/14-11/18/92	319001

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	24*	(48 - 131)

OTE: AS RECEIVED
ND (NONE DETECTED)
* SURROGATE(S) OUTSIDE ACCEPTANCE CRITERIA DUE TO DEMONSTRATED MATRIX EFFECT.

BAKER ENVIRONMENTAL INC

6-B10 11-9-92 1530

WO #: A1971
LAB #: A2K110027-003
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92
TCLP EXTRACTION DATE: 11/13/92
FINAL PH:11.5

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Arsenic	ND	0.5	mg/L	SW846 6010	11/13-12/03/92	318028
Barium	ND	1.0	mg/L	SW846 6010	11/13-12/03/92	318028
Cadmium	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Chromium	0.2	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Lead	ND	0.1	mg/L	SW846 6010	11/13-12/03/92	318028
Selenium	ND	0.3	mg/L	SW846 6010	11/13-12/03/92	318028
Mercury	ND	0.02	mg/L	SW846 7471	11/13-11/21/92	318028

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B10 11-9-92 1530

WO #: A1971
LAB #: A2K110027-003
MATRIX: SLUDGE

DATE RECEIVED: 11/11/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	13		su	SW846 9045	11/11/92	316057
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/16/92	321034
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/13/92	321013
Solids, Total (TS)	99	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175111
LAB #: A2K120024-007
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - TCLP VOLATILE ORGANICS - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Benzene	ND	0.005	SW846 8240	11/18/92	323033
Methyl ethyl ketone	ND	0.05	SW846 8240	11/18/92	323033
Carbon tetrachloride	ND	0.005	SW846 8240	11/18/92	323033
Chlorobenzene	ND	0.005	SW846 8240	11/18/92	323033
Chloroform	ND	0.005	SW846 8240	11/18/92	323033
1,2-Dichloroethane	ND	0.005	SW846 8240	11/18/92	323033
1,1-Dichloroethylene	ND	0.005	SW846 8240	11/18/92	323033
Tetrachlorethylene	ND	0.005	SW846 8240	11/18/92	323033
Trichloroethylene	ND	0.005	SW846 8240	11/18/92	323033
Vinyl chloride	ND	0.01	SW846 8240	11/18/92	323033

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
1,2-Dichloroethane-d4	91	(76 - 114)
Toluene-d8	100	(88 - 110)
Bromofluorobenzene	101	(86 - 115)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175114
LAB #: A2K120024-007 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachlorobutadiene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Hexachloroethane	ND	0.04	SW846 8270	11/19-11/24/92	324013
Nitrobenzene	ND	0.04	SW846 8270	11/19-11/24/92	324013
Pentachlorophenol	ND	0.2	SW846 8270	11/19-11/24/92	324013
Pyridine	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/19-11/24/92	324013
Cresols, Total	ND	0.04	SW846 8270	11/19-11/24/92	324013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	78	(35 - 114)
2-Fluorobiphenyl	62	(43 - 116)
Terphenyl-d14	90	(33 - 141)
2-Fluorophenol	75	(21 - 100)
Phenol-d5	58	(10 - 94)
2,4,6-Tribromophenol	70	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175214
LAB #: A2K120024-007
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92

TCLP SEMIVOLATILE ORGANICS

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	0.04	SW846 8270	11/29-12/02/92	2334004
2,4-Dinitrotoluene	ND	0.04	SW846 8270	11/29-12/02/92	2334004
Hexachlorobenzene	ND	0.04	SW846 8270	11/29-12/02/92	2334004
Hexachlorobutadiene	ND	0.04	SW846 8270	11/29-12/02/92	2334004
Hexachloroethane	ND	0.04	SW846 8270	11/29-12/02/92	2334004
Nitrobenzene	ND	0.04	SW846 8270	11/29-12/02/92	2334004
Pentachlorophenol	ND	0.2	SW846 8270	11/29-12/02/92	2334004
Pyridine	ND	0.04	SW846 8270	11/29-12/02/92	2334004
2,4,5-Trichlorophenol	ND	0.04	SW846 8270	11/29-12/02/92	2334004
2,4,6-Trichlorophenol	ND	0.04	SW846 8270	11/29-12/02/92	2334004
Cresols, Total	ND	0.04	SW846 8270	11/29-12/02/92	2334004

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	104	(35 - 114)
2-Fluorobiphenyl	77	(43 - 116)
Terphenyl-d14	116	(33 - 141)
2-Fluorophenol	99	(21 - 100)
Phenol-d5	65	(10 - 94)
2,4,6-Tribromophenol	93	(10 - 123)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175110
LAB #: A2K120024-007 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

TCLP PESTICIDES

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
Lindane	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Chlordane	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Endrin	ND	0.0005	SW846 8080	11/19-11/21/92	324011
Heptachlor	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Heptachlor epoxide	ND	0.0001	SW846 8080	11/19-11/21/92	324011
Methoxychlor	ND	0.001	SW846 8080	11/19-11/21/92	324011
Toxaphene	ND	0.005	SW846 8080	11/19-11/21/92	324011

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Dibutylchlorendate	61	(24 - 154)
Tetrachloro-m-xylene	64	(60 - 150)

NOTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175109
LAB #: A2K120024-007 DATE RECEIVED: 11/12/92
MATRIX: SLUDGE TCLP EXTRACTION DATE: 11/17/92

- - - - - - - - - - - - - - - - - - REQUESTED PARAMETERS - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT (mg/L)	REPORTING LIMIT	METHOD	EXTRACTION-ANALYSIS DATE	QC BATCH
2,4-D	ND	0.5	SW846 8150	11/17-11/20/92	322056
2,4,5-TP(Silvex)	ND	0.1	SW846 8150	11/17-11/20/92	322056

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
2,4-DB	83	(48 - 131)

OTE: AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175
LAB #: A2K120024-007
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92
TCLP EXTRACTION DATE: 11/17/92
FINAL PH:3.8

- RCRA METALS - - - - - - - - - - - - - - - - - - -

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311 (55 FR 26986)

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
- - TCLP METALS - -						
Silver	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Arsenic	ND	0.5	mg/L	SW846 6010	11/17-12/04/92	322053
Barium	ND	1.0	mg/L	SW846 6010	11/17-12/04/92	322053
Cadmium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Chromium	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Lead	ND	0.1	mg/L	SW846 6010	11/17-12/04/92	322053
Selenium	ND	0.3	mg/L	SW846 6010	11/17-12/08/92	322053
Mercury	ND	0.02	mg/L	SW846 7471	11/17-11/18/92	322053

NOTE:
AS RECEIVED
ND (NONE DETECTED)

BAKER ENVIRONMENTAL INC

6-B11 11-9-92 1600

WO #: A2175
LAB #: A2K120024-007
MATRIX: SLUDGE

DATE RECEIVED: 11/12/92

- - - - - - - - - - - - - - - - - - INORGANIC ANALYTICAL REPORT - - - - - - - - - - - - - - - - -

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Flash Point Closed Cup	>180		deg F	SW846 1010	12/03/92	2338033
pH Non-Aqueous	3		su	SW846 9045	11/12/92	317036
Cyanide, Reactive	ND	10	mg/kg	SW846 7.3.3.	11/16/92	321034
Sulfide, Reactive	ND	50	mg/kg	SW846 7.3.4.	11/16/92	321035
Solids, Total (TS)	66	0.5	%	USEPA 160.3	11/13-11/16/92	318029

NOTE: AS RECEIVED
ND (NONE DETECTED)

WASTE SAMPLING REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA)

EPA/540/P-91/008	Compendium of ERT Waste Sampling Procedures, 1991

1.2 SUBMITTALS

a. Sample Log

b. Contractor Generated Waste Sample Analysis Results

c. Government Generated Waste Sample Analysis Results

1.3 DEFINITIONS

1.3.1 Contractor Generated Wastes

Contractor generated wastes shall include all materials which become contaminated during the course of contract work and wastes generated during the contract work.

1.3.2 Government Generated Wastes

Government generated wastes shall include all impacted soils and drum, storage tank, and container contents existing at Site 6 prior to the commencement of contract work.

1.3.3 Confirmation Sampling

Confirmation sampling shall include all sampling conducted in the open excavations during the post-removal stage to confirm the removal of all contaminated soil.

1.3.4 Waste Characterization Sampling

Waste characterization sampling shall include the collection of wastes generated during the removal action. This sampling is conducted to determine the hazardous nature of the wastes, and the subsequent handling and disposal of the wastes.

1.4 DESCRIPTION OF WORK

1.4.1 Excavation Sampling Requirements

Collect environmental samples from each contractor generated waste stream to determine applicable transportation and disposal requirements.

1.4.2 Government Generated Waste

Collect environmental samples from each government generated waste stream to determine applicable transportation and disposal requirements. Environmental sample analyses will not be required for those composite samples collected during the previous investigations.

1.5 QUALITY ASSURANCE

1.5.1 Waste Sampling

Adhere to all sample acquisition, handling, custody documentation, decontamination, and quality assurance/quality control (QA/QC) requirements and procedures as required by federal, state and local regulations.

1.5.2 Analytical Laboratory

The Contractor will be solely responsible for the execution and accuracy of the waste stream analyses. All analytical standard methods shall meet, at a minimum, Naval Energy and Environmental Support Activity (NEESA) QA/QC Level D requirements for confirmation sampling and Level C requirements for waste characterization sampling and shall also be in accordance with federal, local and state regulations.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

Supply all personnel, equipment, and facilities to collect and analyze the environmental samples required to characterize the wastes.

3.1.1 Sample Acquisition

Sampling procedures shall be consistent with NEESA Guidelines.

3.1.1.1 Confirmation Samples

Confirmation samples shall be collected in the walls and the bottom of the open excavations. One sample from the bottom and the walls of the excavation shall be collected for every 25 linear feet of excavation.

Confirmation samples shall be analyzed for TCLP and RCRA hazardous characteristics using the following SW-846 Methods: TCLP Extraction - SW 1311, TCLP VOA - SW 8240, TCLP SVOA - SW 8270, TCLP Pesticides - SW 8080, TCLP Herbicides - SW 8150, TCLP Metals SW 6010, Ignitability - SW 1010, Corrosivity(pH) - SW 9045, Reactivity (Cyanide) - SW 9012, and Reactivity

(Sulfide) - SW 9030.

3.1.1.2 Waste Characterization Samples

Characterization samples shall be composite soil samples collected for environmental analysis. One sample shall be collected for every 100 cubic yards of soil excavated. Characterization samples shall also be conducted on unidentified materials encountered during this removal action.

Waste characterization samples shall be analyzed for TCL organics/TAL inorganics characteristics in accordance with EPA CLP/SOW.

3.1.2 Sample Handling

Sampling, sample handling, and sampling containers must be consistent with the chemicals expected, the matrix of the sample, and planned analytical procedures. Precleaned glass sample containers with teflon lids are required.

The Contractor shall describe in the Sampling and Analysis Plan strict chain-of-custody procedures to be used during collection, transport, and analysis of all samples.

3.1.3 Sampling Documentation

Maintain a sample log containing, at a minimum, the following information:

a. Date and Time of Sampling

b. Sample Locations

c. Sample Matrix

d. Sample Identification Number

e. QA/QC Sample Identification

f. Analyses to be Performed

g. Type and Number of Sample Containers

h. Signatures of Individuals Performing Sampling

-- End of Section --

SECTION 01561

EROSION AND SEDIMENT CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

FEDERAL SPECIFICATIONS (FS)

FS O-F-241 (Rev. D)	Fertilizers; Mixed, Commercial

U.S. ARMY CORPS OF ENGINEERS (CW) PUBLICATIONS

CW 02215	1977 Plastic Filter Fabric

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D1682	1964 (Rev. 1985) Breaking Load and Elongation of Textile Fabrics
ASTM D3786	1987 Hydraulic Bursting Strength of Knitted Bursting Strength Tester Method

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

NCESCPDM	1988 North Carolina Erosion and Sediment Control Planning and Design Manual

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

NCDOT SSRS	1990 Standard Specifications for Roads and Structures

1.2 DESCRIPTION OF WORK

The work includes the provision of the temporary erosion control measures, to prevent the pollution of water and land within and adjacent to the project limits. Coordination of the installation of temporary erosion control devices shall ensure effective and continuous control of erosion and pollution. Provide and maintain erosion control measures in accordance with the North Carolina Department of Natural Resources Erosion and Sediment Control Manual.

1.3 SUBMITTALS

Submit the following in accordance with Attachment 7 of the Basic Contract.

1.3.1 SD-02, Manufacturer's Catalog Data

a. Silt Fence

1.3.2 SD-04, Drawings

a. Erosion Control Plan G

Submit, for approval, four copies of a Contractor furnished erosion and sediment control plan to the Navy's Technical Representative, a minimum of 14 days prior to start of construction. The plans shall not be a reproduction of the contract documents. The erosion and sediment control plan shall indicate minimum erosion control requirements and shall be site adapted and modified to suit the sequence of construction operations. As a minimum, the Contractor furnished erosion and sediment control plan shall indicate the following:

a. Clearing limits

b. Type, size, and location of temporary erosion control features

PART 2 PRODUCTS

2.1 SILT FENCE

2.1.1 Posts

4 inch by 4 inch wood posts, minimum 3 inch diameter wood, or 1.33 pound per linear foot steel posts. Posts shall be a minimum of 6 feet long.

2.1.2 Wire Fabric

ASTM A185, 6 by 6 minimum 12-1/2 gage.

2.1.3 Filter Fabric

A woven or nonwoven polypropylene, nylon, or polyester containing stabilizers and/or inhibitors to make the fabric resistant to deterioration from ultraviolet, and with the following properties:

a.	Minimum grab tensile strength (ASTM D1682)	100 pounds
b.	Minimum grab elongation (ASTM D1682)	25 percent
c.	Minimum mullen burst strength (ASTM D3786)	210 psi
d.	E.O.S. (CW 02215)	20-100

2.1.4 Standard Catalog Product

A Manufacturer's standard catalog product for a preassembled sediment fence may be provided in lieu of the indicated sediment fence except that the filter fabric shall be as specified, and the height of the structure shall be as indicated.

2.2 GRAVEL FOR CONSTRUCTION ENTRANCE

NCDOT SSRS, Section 520.

2.3 GEOTEXTILE FOR CONSTRUCTION ENTRANCE

NCDOT SSRS, Section 1056.

2.4 WATER FOR DUST SUPRESSION

Water used for dust supression shall be free from oil, acids, alkalis, salts, or any other substance that is toxic or otherwise harmful to surrounding vegetation.

PART 3 EXECUTION

3.1 SILT FENCE

Install posts a maximum of 6 feet on center, and at an angle between 2 degrees and 20 degrees towards the potential silt load area. Do not attach filter fabric to existing trees or structures. Secure filter fabric to the post and wire fabric using staples, tie wire, or hog rings. Imbed the filter fabric into the ground as indicated. Splice filter fabric at support pole using a 6 inch overlap and securely seal. Overlap or reinforce the top edge of the filter fabric a minimum of 1 inch.

The silt fence shall be installed, at a minimum, at the locations shown on the construction drawings.

3.2 GRAVEL CONSTRUCTION ENTRANCE

Place geotextile on top of graded existing soil where construction entrances and access roads are to be constructed. Place gravel on top of geotextile to a minimum of 6 inches thick, at points of vehicular ingress and egress as indicated.

3.3 DUST SUPPRESSOR

Apply water as a dust suppressor on unsurfaced travel ways. Repeat water applications as necessary to control dust emissions.

3.4 MAINTENANCE AND INSPECTION

Inspect erosion control devices after each rainfall and daily during prolonged rainfall. Remove sediment deposits after each rainfall or when sediment reaches approximately one-half the barrier height. Immediately repair damaged erosion control devices and damaged areas around and underneath the devices. Maintain erosion control devices to assure continued performance of their intended function. Modify the Contractor furnished erosion control plan as required to control problem areas notices after each inspection.

3.5 CLEAN UP

At the completion of the job, or when directed or approved by the Navy's Technical Representative, erosion control devices shall be removed. Erosion control devices and areas immediately adjacent to the device shall be filled (where applicable), shaped to drain and to blend into the surrounding contours. Erosion control devices may remain in place when approved by the Navy's Technical Representative.

-- End of Section --

SECTION 02220

EXCAVATION, FILLING, AND BACKFILLING

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. All applicable references of other sections of this specification shall also apply to this section.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 136	1984 (Rev. A) Sieve Analysis of Fine and Coarse Aggregates
ASTM D 1140	1954 (R 1990) Amount of Material in Soils Finer Than the No. 200 (75-Micrometer) Sieve
ASTM D 1557	1978 (R 1990) Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54-kg) Rammer and 18-in. (457-mm) Drop
ASTM D 2487	1990 Classification of Soils for Engineering Purposes
ASTM D 2922	1981 (R 1990) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D 3017	1988 Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
ASTM D 4318	1984 Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D 4397	1991 Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-1909	Fertilizer

CORPS OF ENGINEERS (COE)

COE EM-385-1-1	1992 Safety and Health Requirements Manual

1.2 DEFINITIONS

1.2.1 Cohesive Materials

Materials ASTM D 2487 classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM and SM will be identified as cohesive only when the fines have a plasticity index greater than zero.

1.2.2 Cohesionless Materials

Materials ASTM D 2487 classified as GW, GP, SW, and SP. Materials classified as GM and SM will be identified as cohesionless only when the fines have a plasticity index of zero.

1.3 SUBMITTALS

Submit the following in accordance with Section 01300, "Submittals."

1.3.1 SD-11, Factory Test Reports

Provide certification that imported material is free of contamination.

1.3.2 SD-12, Field Test Reports

Provide field and laboratory confirmatory samples for soil contamination, as necessary.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

Free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, and deleterious, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

2.1.1 Common Fill

Approved, unclassified soil material with the characteristics required to compact to the soil density specified for the intended location.

2.1.2 Backfill and Fill Material

ASTM D 2487, classification GW, GP, GM, GC, SW, SP, SM, SC with a maximum ASTM D 4318 liquid limit of 35 maximum ASTM D 4318 plasticity index of 12 and a maximum of 25 percent by weight passing ASTM D 1140, No. 200 sieve. Base borrow material may also be used. The borrow area is indicated on the drawings.

2.1.3 Topsoil

Natural, friable soil representative of productive, well-drained soils in the area, free of subsoil, stumps, rocks larger than one inch diameter, brush, weeds, toxic substances, and other material detrimental to plant growth. Amend topsoil pH range to obtain a pH of 5.5 to 7.

2.2 IMPORTED MATERIAL

All imported materials required to accomplish the work under these Contract Documents are subject to the following requirements:

a. The Contractor must certify that all imported material is free from contamination. Certification shall be submitted to the Navy's Technical Representative. The source of all imported soil materials must be approved by the Government. Representative samples of imported soil materials must not be hazardous by definition or specific listing under Resource Conservation Recovery Act (RCRA) or Toxic Substance Control Act (TSCA) regulations. The frequency, type, and number of tests and detection limits for analysis of hazardous constituents shall be proposed by the Contractor for approval by the Government.

b. All tests necessary for the Contractor to locate an acceptable source of imported material shall be make by the Contractor. Certification that the material conforms to the specification requirements along with copies of the test results from a qualified commercial testing laboratory shall be submitted to the Navy's Technical Representative for approval at least 10 days before the material is required for use. Samples shall be representative and be clearly marked to show the source of the material and the intended use on the project. Sampling of the material source shall be done by the Contractor in accordance with ASTM D75. The Contractor shall notify the Navy's Technical Representative at least 24 hours prior to sampling. The Navy's Technical Representative may at the Navy's Technical Representative's option, observe the sampling procedures. Tentative acceptance of the material source shall be based on an inspection of the source by the Navy's Technical Representative and/or the certified test results submitted by the Contractor to the Navy's Technical Representative at the Navy's Technical Representative's discretion. No imported materials shall be delivered to the site until the proposed source and material tests have been tentatively accepted in writing by the Navy's Technical Representative. Final acceptance will be based on tests make on samples of material taken from the completed and compacted course. All testing for final acceptance shall be performed by the Navy's Technical Representative.

c. If tests conducted by the Contractor or the Navy's Technical Representative indicate that the material does not meet specification requirements, material placement will be terminated until corrective measures are taken. Material which does not conform to the specification requirements and is placed in the work shall be removed and replaced at the Contractor's expense.

2.3 BORROW

Obtain borrow materials required in excess of those furnished from excavations from the borrow area on MCB Camp Lejeune as indicated.

2.4 POLYETHYLENE SHEETING

ASTM D 4397.

PART 3 EXECUTION

3.1 SITE SAFETY AND SECURITY

3.1.1 Ordnance Survey

Conduct an ordnance survey of all areas scheduled for excavation prior to beginning any earthmoving activities. Ordnance personnel shall remain on-site during all excavation activities.

3.1.2 Gate

A chain link gate shall be placed at the northeast corner of Lot 203, as indicated, to restrict access to the removal areas.

3.2 SURFACE PREPARATION

3.2.1 Clearing and Grubbing

Unless indicated otherwise, remove trees, stumps, logs, shrubs, and brush within the excavation limits. Remove stumps entirely. Grub out matted roots and roots over 2 inches in diameter to at least 18 inches below existing surface. Felled trees may be stacked neatly outside the perimeter of the excavation in the wooded areas.

3.2.2 Unsuitable Material

Remove vegetation, debris, decayed vegetable matter, sod, mulch, and rubbish from excavation areas.

3.3 PROTECTION

3.3.1 Site Drainage

Provide for the collection and disposal of surface and subsurface water encountered during construction.

3.3.1.1 Surface Drainage

So that construction operations progress successfully, completely drain construction site during periods of construction to keep soil materials sufficiently dry. Provide temporary ditches, swales, and other drainage features and equipment as required to maintain dry soils. When unsuitable working platforms for equipment operation and unsuitable soil support for subsequent construction features develop, remove unsuitable material and provide new soil material as specified herein.

3.3.2 Underground Utilities

Location of the existing utilities indicated is approximate. The Contractor shall physically verify the location and elevation of the existing utilities indicated prior to starting construction.

3.4 GENERAL EXCAVATION

Excavate to contours, elevation, and dimensions indicated on the construction drawings. Keep excavations free from water. Excavate soil disturbed or weakened by Contractor's operations, soils softened or made unsuitable for subsequent construction due to exposure to weather. Backfill and compact to 85 percent of ASTM D 698 maximum density. Unless specified otherwise, backfill excavations cut below indicated depth and compact to 85 percent of ASTM D 698 maximum density.

3.5 EXCAVATION OF CONTAMINATED MATERIALS

3.5.1 Materials and Equipment

3.5.1.1 General

Provide all labor, materials, and equipment necessary to accomplish the work specified in these paragraphs.

3.5.1.2 Unclassified Excavation

Excavation is unclassified. All excavation shall be completed regardless of the type, nature, or condition of the materials encountered.

3.5.2 Limits of Excavation

a. Begin the excavations with standard machinery. The Contractor shall manually complete the excavation of drums and containers after they are discovered by mechanical equipment to prevent puncturing or further damaging to the drums and containers. The stained soil area under the 55-gallon aboveground storage tank in Area B, as indicated, shall be excavated with standard mechanical equipment.

b. Remove any stained soils and the surrounding one feet of soil encountered during the excavation. Excavations shall be to the depths shown on the construction drawings or until the soils from the limits of the excavations pass TCLP analysis. A 48 to 72 hour turnaround time shall be required to prevent the excavations from remaining for extended periods of time. All soils removed shall be placed in the appropriate stockpiles.

c. If the integrity of an excavated drum or container is sound and no visible indications of leakage are apparent, the drum or container shall be removed with no additional excavation required.

d. Once the Contractor has excavated the areas to the depths shown on the drawings, the Contractor shall conduct an on-site analysis of the excavation consisting of a visual inspection coupled with field

screening equipment to assess organic vapors.

e. Final excavation areas shall be governed by field conditions and determined by the Navy's Technical Representative.

f. Remove, segregate, and stockpile all debris such as metal, wood, and building materials uncovered during the excavation for proper disposal.

g. Construct a small berm around the top perimeter of the excavation areas to prevent surface waters from entering the pits. Remove and contain any ponded water collected in the excavations.

h. If a rupture occurs during the excavation or moving process; collect, contain, and overpack the spilled drum contents and the affected soil.

i. Provide temporary containment areas at the locations indicated. Cover the containment areas with 40 mil polyethylene sheeting. Place excavated contaminated soil or the drums to be disposed of on the impervious barrier and cover with 40 mil polyethylene sheeting. Provide a compacted soil berm around the outer limits of the containment areas and cover with polyethylene sheeting. Secure the edges of the sheeting as indicated.

j. Transfer all drums, containers, debris and soil to the designated storage areas for processing and disposal.

k. Contaminated materials shall be loaded into covered containers or vehicles designed to transport such materials without spillage. Care shall be taken during loading operations to minimize the potential for spillage, tracking, or other means of deposition of contaminated materials outside the work area. Contaminated materials which become spilled on roads, street, or other areas outside the limits of excavation during the loading operation shall be immediately reported to the Navy's Technical Representative, and immediately cleaned up to the satisfaction of the Navy's Technical Representative.

l. Backfilling of excavated areas will begin only after the approval of the Navy's Technical Representative.

m. The Contractor and the Navy's Technical Representative shall work together closely to coordinate excavation, sampling, and analyses to minimize downtime. The Contractor shall schedule work to minimize downtime.

3.5.3 Method of Measurement

a. The solid wastes shall be separated according to their final disposal requirements. The quantity of work done under this paragraph will be measured in tons of "Excavation" which shall be the actual weight of the solid waste removed.

b. No separate measurements will be made for control of water, protection of obstructions, or other work associated with the excavation and loading of materials at the site. These tasks are considered to be incidental to and part of the work specified.

3.6 FILLING AND BACKFILLING

Fill and backfill to contours, elevations, and dimensions indicated. Compact each lift before placing overlaying lift.

3.6.1 Fill Placement

Provide for general site. Fill may be obtained from the borrow area located approximately three miles from Storage Lot 203, as indicated. Place in 2-foot lifts. Compact areas not accessible to rollers or compactors with mechanical hand tampers. Aerate material excessively moistened by rain to a satisfactory moisture content. Finish to a smooth surface by blading, rolling with a smooth roller, or both.

3.6.2 Method of Measurement

a. The quantity of work done under this paragraph will be measured in cubic yards of "Replacement of Soil and Site Restoration" which shall consist of the volume of backfill actually placed back into the excavations at the site as specified herein.

b. No separate measurement will be make for grading or finishing the site. These tasks are considered to be incidental to and part of the work specified for "Replacement of Soil and Site Restoration".

3.7 COMPACTION

Expressed as a percentage of maximum density. Determine in-place density of existing subgrade; if required density exists, no compaction of existing subgrade will be required.

3.7.1 General Site

Compact underneath areas designated for vegetation by routing heavy machinery over the backfill area for three passes for each lift of backfill.

3.8 FINISH OPERATIONS

3.8.1 Grading

Finish grades to within one-tenth of one foot of existing surrounding contours. For existing grades that will remain but which were disturbed by Contractor's operations, return to original grade.

3.8.2 Seed

Scarify existing grade. Seed shall match existing vegetation. Provide seed at 5 pounds per 1000 square feet. Provide CID A-A-1909, Type I, Class 2, 10-10-10 analysis fertilizer at 25 pounds per 1000 square feet.

Provide mulch and water to establish an acceptable stand of grass.

3.8.3 Protection of Surfaces

Protect newly graded areas from traffic, erosion, and settlements that may occur. Repair or reestablish damaged grades, elevations, or slopes.

3.9 DISPOSITION OF SURPLUS MATERIAL

Remove from Government property surplus or other soil material not required or suitable for filling or backfilling, and brush, refuse, stumps, roots, and timber.

-- End of Section --

SECTION 02223

TRANSPORTATION AND DISPOSAL OF CONTAMINATED MATERIAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

1.1.1 Code of Federal Regulations:

40 CFR Parts 260 to 280
49 CFR Parts 100 to 180

1.2 SUBMITTALS

1.2.1 Documentation

Provide the Navy's Technical Representative with the following decontamination, transportation and disposal documentation:

a. Written verification that the proposed disposal site is permitted to accept the contaminated materials specified, prior to the start of excavation. All treatment and disposal facilities shall be identified. Permitting and licensing information shall be provided for each facility along with a contact person, address, and a telephone number. The specific waste types to be treated and disposed must be clearly identified.

b. Copies of manifests and other documentation required for shipment of waste materials within 24 hours after removal of waste from the site.

c. Verification that the wastes were actually delivered and disposed of at the disposal site, within 7 days of disposal.

d. Verification that all vehicles and containers were decontaminated prior to leaving the disposal site, within 3 days of disposal.

e. Verification that all vehicles and containers were decontaminated prior to leaving Site 6, were properly operating, and were covered, within 24 hours after removal of waste from the site.

1.3 DEFINITIONS

The following definitions shall apply, in addition to the definitions for the various waste types described in Part 4 of the Basic Contract.

1.3.1 Government Generated Waste

Government generated waste shall include all contaminated soils, drums and containers, storage tanks, debris and container contents existing at the

site prior to the commencement of contract work.

1.3.2 Contractor Generated Waste

Contractor generated waste shall include all materials which become contaminated with wastes as defined in the Basic Contract as a result of Contractor activity at the site after the commencement of contract work.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 GENERAL

3.1.1 Materials and Equipment

Furnish all labor, materials, and equipment necessary to transport and dispose of contaminated soils, drums, tanks, contaminated materials, and overpack drum contents in accordance with applicable Federal, State, and local requirements.

3.1.2 Waste Disposal

3.1.2.1 Processing Sampling Wastes

Wastes generated during hazard characterization and compatibility testing, which shall include but not be limited to, all surplus samples, glass jars, sampling devices, and chemical materials, shall be packed in overpack drums and labeled for off-site disposal.

3.1.2.2 Processing Empty Drums and Containers

All empty drums and containers shall be triple-rinsed in accordance with federal, state, and local requirements. Empty drums shall then be crushed and staged for disposal or recycling.

3.1.2.3 Processing Empty Storage Tanks

All empty storage tanks shall be thoroughly rinsed and cleaned in accordance with federal, state, and local requirements. All potentially flammable or combustible sludges, residues and vapors shall be removed or their effects mitigated prior to decommissioning the storage tank. The Contractor shall stage the resulting scrap metal for disposal or recycling.

3.1.2.4 Processing Rinsate Solutions

Containerize in compatible drums all rinsate solutions for sampling and disposal. The drums containing rinsate solution shall be placed in the final staging area.

If an empty drum, storage tank, or container has an oil-based residue, it shall be triple-rinsed with high pressure water or steam. The decontamination fluids shall be containerized separately and placed in the

final staging area for preparation for disposal.

3.1.3 Transportation and Disposal Records

Provide and prepare all waste shipment records/manifests for hazardous and nonhazardous wastes, required by the Resource Conservation and Recovery Act (RCRA) and the U.S. Department of Transportation (DOT). The Contractor shall complete all labels, profile sheets, and disposal restriction forms as necessary, including all DOT, USEPA, and state classifications. The Contractor shall provide a 48 hour notification to MCB Environmental Management Division for required signatures on waste manifests. Following completion of all paperwork, the Contractor shall submit this material and supporting documentation to the Navy's Technical Representative.

3.1.4 Transportation

The Contractor shall be solely responsible for complying with all federal, state, and local requirements for transporting hazardous materials through the applicable jurisdictions and shall bear all responsibility and cost for any noncompliance. In addition to those requirements, the Contractor shall do the following:

a. The Contractor shall weigh all containers for disposal prior to leaving MCB Camp Lejeune. The Contractor may use MCB landfill scales if the scales operator is provided with a 24 hour notification. The existing scales in Storage Lot 203 may be used. The Contractor shall provide certified accuracy of the scales at Lot 203 to $\pm$10 percent.

b. Inspect and document all vehicles and containers for proper operation and covering.

c. Inspect all vehicles and containers for proper markings, manifest documents, and other requirements for waste shipment.

d. Perform and document decontamination procedures prior to leaving the worksite and again before leaving the disposal site.

3.1.5 Disposal

All contaminated materials classified as hazardous under RCRA (40 CFR Part 261) that are removed from the site shall be disposed of in a RCRA hazardous waste treatment/disposal facility permitted to accept such materials.

All construction rubble materials excavated from the site shall be disposed of in a North Carolina-approved solid waste disposal facility permitted to accept such materials.

All decontaminated metal material shall be taken to a metal recycling facility.

-- End of Section --

SECTION 13100

DRUM AND CONTAINER REMOVAL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN PETROLEUM INSTITUTE (API)

API 2015 Cleaning Petroleum Storage Tanks

1.2 SUBMITTALS

a. Compatibility Testing and Hazard Categorization Support Documentation.

b. Manifest Documentation

c. Certification of Industrial Hygienist

1.3 DEFINITIONS

The following definitions shall apply to all removal requirements.

1.3.1 Spill

A spill shall denote both an intentional and unintentional uncontrolled discharge or release resulting in any quantity of a possibly hazardous constituent running off or about to run off the external surface of equipment or other source, as well as contamination resulting from those releases.

1.3.2 Leak

Leak or leaking shall denote an instance in which any article, container, or equipment has a liquid or semi-liquid on any portion of its external surface.

1.3.3 Container

A container shall be any portable device with a capacity less than of equal to five gallons in which a material can be stored, handled, transported, treated or disposed of.

1.3.4 Drum

A drum shall be any portable device with a capacity greater than five gallons in which a material can be stored, handled, transported, treated or disposed of.

1.3.5 Open

A container or drum shall be considered open if there are any visible holes on the surface of the container or drum, or if the container or drum appear to be leaking.

1.4 HEALTH AND SAFETY

1.4.1 Training

Provide each employee and visitor to the site with a copy of the site Health and Safety Plan. Instruct employees on the dangers of chemical exposure, respirator use, decontamination, and applicable OSHA and EPA regulations prior to the start of work.

1.5.2 Certified Industrial Hygienist (CIH)

Obtain the services of an industrial hygienist certified by the American Board of Industrial Hygiene to regulate training, review and approve removal plans, and determine the need for personnel protective equipment in performing removal work.

PART 2 PRODUCTS

2.1 OVERPACK DRUMS

Overpack drums shall meet all federal, state, and local regulations regarding waste containment and transportation. Overpack drums other than 55 or 95 gallon capacity may be used, but must meet the corrosion and reactivity requirements specified in the following sections. The Contractor shall notify the Navy's Technical Representative for approval prior to utilizing any overpack drums not specified below.

2.1.1 Steel Overpack Drums

Steel overpack drums shall have an 55-gallon capacity and have an open-head with a corrosion resistant epoxy liner, bolt ring, bolt nut, and rubber sponge gasket.

2.1.2 Polyethylene Overpack Drums

Polyethylene overpack drums shall have a 95-gallon capacity and shall be ultra violet light inhibiting with a closed cell polyethylene gasket.

2.2 Rinsate Solutions and Solvents

Rinsate solutions shall be required to triple-rinse and remove any residual solids, liquids, or vapors from the drums and containers.

PART 3 EXECUTION

3.1 TEMPORARY DRUM STORAGE

A temporary processing area, a temporary rinse area, and a temporary staging area are to be constructed within the secured (fenced) portion of the site. The bermed processing, rinsing, and staging areas shall be lined with 40 mil. polyethylene sheeting or equivalent. A detail of the temporary drum storage area is located in the construction drawings.

3.2 REMOVAL OF DRUMS AND CONTAINERS

Remove all drums and containers from the ground surface and the excavated pit areas as shown on the construction drawings. All leaking or open drums and containers holding liquids, sludges, or solids, as well as deteriorated drums that may rupture during handling shall be placed into overpack drums compatible with the drum's contents.

Empty and deteriorated drums shall be transferred to the drum staging area.

If the potential exists for spilling the liquid contents of the drums and containers during the excavation or moving process, the liquid shall be transferred to an overpack drum using a portable pump capable of transferring the liquid to an appropriate container prior to moving the existing container.

If a rupture occurs during the excavation or moving process, the spilled drum contents and affected soil shall be contained, collected, and overpacked. Remove all contaminated soil as delineated in the construction drawings as well as removing a two foot width of soil around and beneath the perimeter of any spill area. The soil shall be placed in the overpack drum containing the spilled drum contents. All excavations shall remain open until the excavated areas are sampled, tested, certified to be clean and approved by the Navy's Technical Representative.

Transfer all overpack drums, drums and containers holding liquids, solids, or sludges to a lined containment area for compatibility testing and hazard categorization.

3.3 PROCESSING OF DRUMS, CONTAINERS AND THEIR ASSOCIATED CONTENTS

The Contractor shall be responsible for all hazard categorization and waste compatibility testing in accordance with all Federal, State, and local regulations. The Contractor shall be responsible for providing the disposal facilities with all necessary waste analysis and profiles that may be required for waste disposal acceptance. The Contractor shall perform any sampling and analyses required to verify or supplement the analytical results provided at the end of this section and to profile the waste materials for disposal.

3.4 SITE ENTRY AND SAFETY

Initially identify the size, color, condition, type and identifying markings on each of the drums and containers. In addition to the drum categorization and testing results, provide daily recording of

meteorological conditions and other pertinent information regarding site conditions and operations.

Personnel safety monitoring procedures as described in the Health and Safety Plan will be strictly adhered to during the handling, hazard characterization process and the compatibility testing. Personnel safety monitoring equipment shall include, but not be limited to, a combustible gas indicator for monitoring the lower explosive limit (LEL) and oxygen content of the ambient atmosphere, a photoionization detector, and a radioactivity survey meter. Testing, characterization, and handling operations shall be monitored with the radiation survey instrument, organic vapor detector, and combustible gas indicator.

-- End of Section --

SECTION 13219

CLEANING ABOVE GROUND STORAGE TANKS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z88.2	1980 Respiratory Protection

AMERICAN PETROLEUM INSTITUTE (API)

API RP 500C	1984 (R1990) Locations for Electrical Installations at Pipeline Transportation Facilities
API RP 2003	1991 Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910	Occupational Safety and Health Standards

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA)

EPA SW-846	1986 Evaluating Solid Waste
EPA 600-4-79-20	1976 Contaminant Monitoring

FEDERAL SPECIFICATIONS (FS)

FS TT-T-291	(Rev. F) (Int Am. 1) Thinner, Paint, Mineral Spirits, Regular and Odorless
FS O-D-1276	(Rev. B) Disinfectant-Detergent, General Purpose (Pine Oil)

NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 85-101	1990 NIOSH Certified Personnel Protective Equipment List

1.2 SUBMITTALS

Submit the following:

1.2.1 SD-02, Manufacturer's Catalog Data

a. Cleaning agents

b. Gasoline-oil-resisting rubber gloves and boots

c. Respiratory protective equipment

d. Disinfectant

Submit identification for the items by designated name, specification number, project contracting number, and intended use.

1.2.2 SD-06, Instructions

a. Tank cleaning agents

Submit material safety data sheets for materials to be used at the job site, in accordance with 29 CFR 1910.1200.

1.2.3 SD-08, Statements

a. Tank certification of safety

1.2.3.1 Tank Certification of Safety

Submit certification, from an NFPA certified "Marine Chemist" stating that tank is safe for hot work and that special precautionary measures have been taken for workers to enter the tank to perform the work.

1.2.4 SD-10, Test Reports

a. Tank contents tests

1.2.5 SD-13, Certificates

a. Respiratory protective equipment

b. Combustible gas indicator

c. Hydrogen-sulfide (H_2S) indicator

d. Oxygen meter

e. Velometers

Submit certificates for the items listed. Where equipment or materials are specified to conform with the standards of organizations, such as National Institute for Occupational Safety and Health (NIOSH), Underwriters Laboratories (UL), and American Petroleum Institute (API), include a label or listing indicating compliance. In lieu of the label or listing, the Contractor may submit a test report from an approved testing organization stating that the item has been tested in accordance with the specified organization's test methods and that the item conforms with the organization's standard or code.

1.2.6 SD-18, Records

a. Tank disposal paperwork

1.3 QUALITY ASSURANCE

1.3.1 Modification of References

Except as modified herein, the work shall conform with the recommendations of API RP 500C and API RP 2003, API PUBL 2015. Where the word "should" appears in these publications, substitute "shall."

1.3.2 Copies of Standards

Furnish four copies of API RP 500C AND API RP 2003, API PUBL 2015.

1.3.3 Regulatory Requirements

a. Obtain permits required to comply with local state, and federal regulations.

b. Hazardous wastes, such as water, sediment, and sludge, shall be packaged, labeled, stored, transported, treated and disposed of in accordance with 40 CFR 260 through 40 CFR 266 and state and local regulations. Transporters, sorters, treaters and disposers must be certified and have EPA ID numbers. Payment for disposal of hazardous waste will not be made until a completed hazardous waste manifest from the treatment or disposal facility is returned, and a copy furnished to the Government.

1.4 DELIVERY AND STORAGE

Deliver equipment and materials to the site in an undamaged condition bearing the manufacturer's name and brand designation. Store equipment and materials off the ground to provide proper ventilation, drainage, and protection against dampness. Replace defective and damaged equipment and materials.

1.5 JOB CONDITIONS

1.5.1 Safety

Ensure that employees are trained in the requirements of 29 CFR 1910.1200 and understand the information contained in the MSDS for protection against toxic and hazardous chemical effects.

1.6 SCHEDULING AND SEQUENCING

1.6.1 Sequence of Primary Phases of the Cleaning Procedure

a. Planning the operations

b. Preparation for cleaning

c. Vapor-freeing of the tank

d. Cleaning the tank

e. Clean-up, residue disposal, inspection, and acceptance.

1.6.2 General Scheduling

Complete the work specified in this section before any other work in the tank is started. The work includes the complete interior cleaning of the storage tanks.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Cleaning Agents

a. Detergent: FS O-D-1276.

b. Solvent: FS TT-T-291, Type II, minimum flashpoint of 60 degrees C.

c. Approved commercial cleaning agent.

2.2 EQUIPMENT

Furnish necessary clothing and equipment for the work and protection of people cleaning the tanks. Electrical equipment and wiring shall be in accordance with NFPA 70, Class 1, Group D, Division 1. Provide any item or items for the protection of these people including but not limited to the following:

a. Gasoline-Oil-Resisting Rubber Gloves and Boots: Gauntlet type and conductive type respectively (acid-proof rubber is an acceptable material); furnished for each person handling sludge materials on the exterior of the tank, plus one extra pair each for emergency use.

b. Cotton Coveralls and Hard Hat: Light colored; one change per person per day, and an adequate supply of chemical-resistant disposable coveralls to be worn over cotton coveralls.

c. Combustible Gas Indicator, Hydrogen-Sulfide (H_2S) Indicator, Benzene Indicator and Oxygen Meter.

d. Shovels, Buckets, Brooms, Wrenches, Scrapers, Squeegees, Wire Brushes, Scrub-Brushes, Ladders, Staging, and Other Tools: Do not use brooms or brushes that have plastic or synthetic bristles.

e. Lighting: UL 844, explosion-proof, minimum 50 footcandle, floodlight type, or Mining Enforcement and Safety Administration (MESA) approved, explosion-proof, portable battery-powered light.

f. Air Movers for Tank Ventilation: Explosion proof electrically operated or air driven. Nonferrous fan blades. Use velometers for measuring velocity.

g. Soap for Personnel Washing: Non-phosphate type.

h. A.B.C. Fire Extinguishers: UL listed 2A: 40B: C, 2A: 20B: C, or 4A: 30B: C; minimum 15 pound capacity.

i. First Aid Kit: One 16-unit kit for each 25 persons.

PART 3 EXECUTION

3.1 REMOVAL AND DISPOSAL OF TANKS

Furnish labor, materials, and equipment to remove and dispose of products remaining in the tanks; clean and vapor free the tanks; sample wash water to determine if contaminated; dispose of tanks and associated piping.

3.2 PROJECT CONDITIONS

The following conditions shall be met while the aboveground storage tank cleaning and removal is underway:

a. The Contractor's qualified supervisor is present.

b. The Contractor's personnel have been briefed by the supervisor on the procedure and role of each employee in the event of an emergency.

c. Required equipment is approved and properly located.

d. Tank air is monitored and corrective action is taken to ensure that the vapor concentration is less than 10 percent of the lower flammable limit (LFL), hydrogen sulfide is less than 10 ppm permissible exposure level (PEL), benzene is less than 10 ppm PEL and oxygen content is a minimum of 19.5 percent.

e. An NFPA certified "Marine Chemist" has certified that the tank is safe for hot work, and that the required special precautionary measures have been taken due to the potential health hazard to the worker that still exists, even when the vapor concentration is well below the LFL. The Contractor shall be responsible for reviewing the record drawing(s) of the tanks to be cleaned.

f. People entering the area leave smoking materials such as cigarettes and flame-producing devices at a previously determined location.

g. When work involves handling and disposal of hazardous waste, the Contractor has a copy of 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, and 40 CFR 266 in his possession.

h. Permit only personnel authorized in the safety plan within 100 feet of the tank perimeter.

3.2.1 Traffic Control

Direct traffic minimum 200 feet away from the tank cleaning area. Set up road blocks and warning signs. Do not operate vehicles in hazardous areas.

3.2.2 Miscellaneous

Ensure that the manufacturers have labelled containers holding products involving hazards in use or storage, in accordance with 29 CFR 1910.1200. Label containers used to store, transport, or dispose of hazardous waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, and 40 CFR 266 and State Regulations. Remove small objects of ferrous metal within the working areas to prevent the accidental striking of a spark. Place equipment upwind of tank openings at highest elevation possible; do not place in a spot lower than the surrounding terrain. Provide floodlights to illuminate the work area, if necessary, without the need for battery operated handlights. Provide scaffolding, platforms, and ladders for secure, safe accessibility to tank surfaces. Install electrical equipment in accordance with API RP 500C. Do not use artificial lights inside tank until the tank is vapor-free.

3.2.2.1 Grounding and Bonding for Equipment

Provide grounding and bonding for equipment which may generate static electricity.

3.2.2.2 Fire Extinguishers

Furnish two carbon-dioxide fire extinguishers of minimum 15 pounds capacity each, in the immediate vicinity of the work. Provide a continuous fire watch. CAUTION: Do not discharge high pressure carbon dioxide extinguishers where explosive vapors exist since the discharge can cause a spark which will ignite the vapors.

3.2.2.3 Removal of Ignition Sources

Remove sources of ignition from the cleaning area. Do not permit ignition producing devices, including matches, lighters or cigarettes, within 100 feet upwind and 200 feet downwind of a tank.

3.2.2.4 Survey of Hazardous Areas

Carefully survey the entire area around the tank to be cleaned to ensure that there are no hazardous areas and that all unauthorized personnel are cleared from the area. Ensure that there is no possibility of anyone smoking in the immediate vicinity. Hazardous areas are defined as follows:

a. Interior of tanks.

b. Areas within 100 feet from points having flammable vapor emissions which, for example, are from the exhaust manholes of tanks under repair, open vents or pressure vacuum vents (breather valves) of active tanks in the vicinity of tanks under repairs or cleaning.

CAUTION: Allowance shall be made for 4 or more miles-per-hour winds by increasing the size of the hazardous area to a minimum of 200 feet on the downward side.

3.3 INSPECTION

3.3.1 Inspection of Equipment

3.3.1.1 Respirators

Respirator users shall inspect their respirators in strict accordance with the instructions provided by the manufacturer.

3.3.1.2 Monitoring Equipment

Calibrate each day before use:

a. Combustible gas indicator

b. Oxygen meter

c. H_2S Indicator

3.3.1.3 Other Equipment

Ensure:

a. Proper grounding and bonding;

b. Explosion-proof motors; and

c. Explosion-proof lighting.

3.3.2 Personnel Inspection

3.3.2.1 Clothing

Personnel for Proper Attire Commensurate with Hazards Involved: Check for:

a. Clean clothing in good condition (wear freshly laundered clothing at the beginning of the job and at the start of each workday thereafter).

b. Boots and gloves of approved type and in good condition.

3.3.2.2 Gum or Tobacco Chewing

Ensure that gum or tobacco chewing is prohibited.

3.3.2.3 Physical Defects or Injuries

Ensure that people have no physical defects or injuries which may prevent their wearing respirators or which may cause rescue to be difficult. No beards, sideburns, or large mustaches shall be allowed on people who must

wear respirators.

3.3.2.4 Alcoholic Beverages and Drugs

Ensure that people entering the tank are not under influence of alcoholic beverages and drugs.

3.3.2.5 Females with Child-Bearing-Capability

Females with child-bearing capability shall not be allowed to work in contaminated areas or in leaded gasoline or chemically contaminated tanks since they may be seriously affected by organic lead compound or other chemical contaminants.

3.3.2.6 Hazardous Areas

Check hazardous areas as defined in paragraph entitled "Survey of Hazardous Areas."

3.4 FUEL REMOVAL

All possible fuel will be pumped or otherwise removed from the tank. Consider remaining fuel contaminated or waste fuel; pump into 55 gallon drums or other suitable containers for disposal in accordance with approved procedures meeting local, state, and federal regulations. Dispose of remaining fuel emulsions in accordance with applicable local, state, and federal regulations. Drums or tanks used for containerizing waste fuel will be furnished by the Contractor.

3.5 PURGING

Remove flammable vapors in accordance to API RP 1604. Tanks shall be certified as "Gas Free" prior to further work.

3.6 TANK CLEANING

For the interior of the tanks, the shell, bottom, columns, roof, roof beams, and interior accessory equipment such as pumps, piping, and ladders, shall be cleaned to the sound surface of the lining or coating, free of rust, dirt, scale, loose materials, fuel, oil, grease, sludge, and other deleterious materials. Do not damage sound existing lining material. Remove unsound or loose lining or coating and clean the surfaces exposed thereby to bare metal or concrete as applicable. Immediately notify the Navy's Technical Representative if the lining or coating is deteriorated or loose.

3.6.1 Water, Sediment, and Sludge Analysis

The Contractor shall be responsible for testing the water, sediment, and sludge in accordance with 40 CFR 261. Submit laboratory reports to the Navy's Technical Representative describing sampling and testing procedures used, test results, and findings. If the Contractor's tests determine that the water, sediment, and sludge are hazardous, then the hazardous wastes shall be packaged, labeled, stored, transported, treated and disposed of in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR

263, 40 CFR 264, 40 CFR 265, and 40 CFR 266. Transporters, storers, treaters and disposers must be certified and have EPA ID numbers. Payment for disposal of hazardous waste will not be made until a completed hazardous waste manifest from the treatment or disposal facility is returned, and a copy furnished to the Government. Nonhazardous or hazardous wastes shall be handled and disposed of as described below.

3.6.2 Water Removal and Disposal

Pump or otherwise remove water from the tank. Ensure that the sludge and sediment are not pumped out or mixed with the water. The water shall be packaged, labeled, stored, transported, treated, and disposed of in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, and 40 CFR 266.

3.6.3 Sludge and Sediment Removal and Disposal

Squeegee or brush any sludge, sediment, or other loose material into piles, shovel into buckets or other suitable containers, and remove from the tank.

3.6.3.1 Removal of Sludge

Sludge in the tank shall be disposed of by the Contractor. Package, label, store, transport, treat, and dispose of hazardous sludge and sediment in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, and 40 CFR 266.

3.6.4 Washing

After water, fuel, and sludge have been removed, thoroughly wash the tank interior. Minimize the use of water; substitute brush blasting when practical. Start washing at the top of the walls and columns and work down to the floor. Wash the floor last starting from the sides and working towards the sump. Wash to remove oil, sludge, wax, tar, and other fuel residue adhering to the surface. Wash by any one or a combination of the following methods:

a. Use only fresh water under pressure.

b. Apply a detergent conforming to FS O-D-1276 by spray or brush and soak approximately 30 minutes.

c. Apply a detergent cleaning solution by spray or brush and allow to soak approximately 30 minutes. The cleaning solution shall be either a one-to-one ratio of detergent conforming to FS O-D-1276 and solvent conforming to FS TT-T-291 or an equivalent commercial cleaning agent as approved by the Navy's Technical Representative.

d. Hand-scrub the surfaces vigorously with long-handled stiff-bristle brushes. Wet the brushes intermittently with fresh cleaning agent during scrubbing process. For heavily oil-soaked areas which still appear to retain some residue after first scrubbing, give a second application of cleaning agent and repeat the scrub process a second time. Scrub until clean.

e. Rinse the surfaces thoroughly with fresh water.

3.6.5 Wash Water, Detergent Solution, and Sediment Removal

During the washing process, operate a portable pump continuously with suction hose extended to the tank bottom to remove water, detergent, dirt, oil, or other loose materials washed off. Following the final rinse, pump, squeegee, and mop the tank dry.

a. Prior to discharge or disposal, test the wash water, sediment, and sludge in accordance with paragraph titled "Water, Sediment, and Sludge Analysis," if previous test results showed that the water, sediment, and sludge were hazardous.

3.7 FINAL CLEAN-UP

After the Navy's Technical Representative has inspected and accepted the tank cleaning and before final inspection, accomplish the following work:

3.7.1 Stenciling Tank

Stencil on the tank in 3/4-inch letters adjacent to the manhole openings the following data:

Date Cleaned

Contractor Name

Address

3.7.2 Restoration of Site to Original Condition

Remove, from the site, debris and equipment and materials used for the cleaning operations. Restore the site to its original condition.

-- End of Section --

CONTACTS FOR DRUM REMOVAL ACTION
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SERVICE DELIVERY ORDER N47408-92-D-3042 D.O. 20

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SUBMITTAL APPROVAL & DISTRIBUTION
TIME CRITICAL REMOVAL ACTION, SITE 6, OPERABLE UNIT NO. 2
MCB CAMP LEJEUNE, JACKSONVILLE, NC
(CONSTRUCTION)

August 13, 1993

DISTRIBUTION KEY

1 = COTR 2 = RPM 3 = NTR 4 = PCAS (NOT USED)
5 = ACTIVITY 6 = NAVFACCO 7 = LANTDIV CODE 405 8 = LANTDIV CODE 05

Item Number	Receiving Date	Document to be Reviewed By	Distrib. Letter Sent to NAVFACCO	Description	Type Required	Approval & Distribution	Specification or Drawing Reference	Submittal Suspense	Frequency
1				Submittal Status Log	See Section 7 of Basic Contract	1, 2, 3, 6 CQC Approval	01010	10 days after award of D.O.	One Time.
2				CQC Plan Addenda	"	1, 2, 3, 5 6 (notify) NTR Approval	01010	20 days after award of D.O.	As needed for approval.
3				Testing Laboratory Qualifications	"	2, 3 CQC Approval	01010	15 days after award of D.O.	One Time.
4				Site Health and Saftey plan	"	1, 2(2 copies), 3, 5. 6 (notify) CQC Approval	01010	20 days after award of D.O.	As needed for approval.
5				Work Plan	"	1, 2, 3, 5, 6	01010	20 days after award of D.O.	As needed for approval.
6				As-Built Record Drawings	"	2 (4 copies), 3, 5, 6(notify), 8 CQC Approval	01010	Prior to completion of the project	One Time.

NOTE: Submittals required by specifications and/or drawings shall be delivered as specified, regardless of information provided or omitted in this table. All submittals shall be classified as Distribution A (Approved for Public Release).

Item Number	Receiving Date	Document to be Reviewed By	Distrib. Letter Sent to NAVFACCO	Description	Type Required	Approval & Distribution	Specification or Drawing Reference	Submittal Suspense	Frequency
7				As-Built Record of Materials	See Section 7 of Basic Contract	2, 3, 5, 6(notify), CQC Approval	01010	Prior to completion of the project	One Time.
8				Site Sampling and Analysis Plan	"	1, 2(5 copies), 3, 5, 6 NTR Approval	01010	20 days after award of D.O.	As needed for approval.
9				Status Reports	"	1, 2, 3, 5 6 (notify) CQC Approval	01010	Monthly, beginning 30 days after D.O. award.	Monthly
10				Non-Compliance Check-Off List	"	2, 3 CQC Approval	01010	Every 30 days after D. O. award.	As needed.
11				Test Results Summary Report	"	3, 5 CQC Approval	01010	Every 30 days after D. O. award.	As needed.
12				Daily Reports to Inspector	"	3 CQC Approval	01010	Start of construction.	Every work day.
13				Contractor Closeout Report	"	2 (2 copies), 3, 5 CQC Approval	01010	Completion of project.	One Time.
14				*Permits*	"	3, 5, 6 (notify)	01010	DRAFT: 20 days after D.O. award	As needed for approval.
15				Construction Schedule	"	1, 2, 3, 5, 6 (notify) CQC Approved	02220	20 days after award of D.O.	One Time

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Item Number	Receiving Date	Document to be Reviewed By	Distrib. Letter Sent to NAVFACCO	Description	Type Required	Approval & Distribution	Specification or Drawing Reference	Submittal Suspense	Frequency
16				Certification of Clean Material	See Section 7 of Basic Contract	2, 3 CQC Approval	02220	10 days prior to excavation.	One for each (off-base) source of borrow.
17				Contamination Confirmatory Sampling Results (Field)	"	2, 3, 5 CQC Approval	02220	So as not to delay work.	As needed.
18				Certificate of Permitted Disposal Facility	"	3, 5 CQC Approval	02223	7 days prior to beginning excavation.	One for each disposal facility used.
19				Waste Shipment Documentation	"	3, 5 CQC Approval	02223	Within 24 hours after removal from site.	Once per load.
20				Certificate of Material Acceptance	"	3, 5 CQC Approval	02223	Within 7 days of disposal.	Once per load.
21				Certification of Vehicle Decontamination at Disposal Site	"	3, 5 CQC Approval	02223	Within 7 days of disposal.	Once per load.
22				Certification of Vehicle Decontamination at Site	"	3, 5 CQC Approval	02223	Within 24 hours after removal from site.	Once per load.

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