



**OHM Remediation  
Services Corp.**

02.08 - 10/01/98

02341

**CONTRACTOR'S CLOSEOUT REPORT**

**SOIL REMEDIATION  
OPERABLE UNIT 1, SITES 21 AND 78  
MCB CAMP LEJEUNE  
JACKSONVILLE, NORTH CAROLINA**

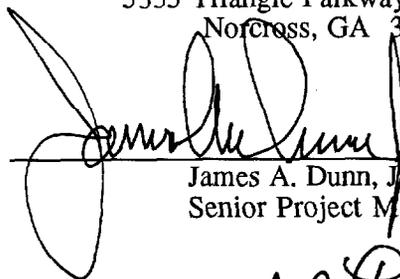
Contract No. N62470-93-D-3032  
Delivery Order 0062

Submitted to:

**Atlantic Division Naval Facilities Engineering Command  
Norfolk, Virginia**

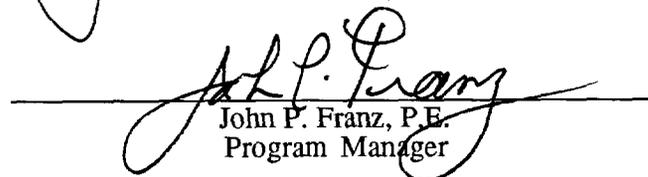
Submitted by:

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OHM Project No. 16866

October 1996

## **TABLE OF CONTENTS**

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### **EXECUTIVE SUMMARY**

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1-1</b>
<b>2.0</b>	<b>SUMMARY OF ACTION</b> .....	<b>2-1</b>
2.1	Submittals .....	2-1
2.2	Mobilization and Site Preparation .....	2-2
2.3	Delineation of Contaminated Soil .....	2-2
2.4	Excavation of Contaminated Soil .....	2-2
2.5	Backfilling and Revegetation .....	2-3
<b>3.0</b>	<b>FINAL HEALTH AND SAFETY REPORT</b> .....	<b>3-1</b>
3.1	Mobilization and Site Preparation .....	3-1
3.2	On-Site Operations .....	3-1
3.3	Air Monitoring .....	3-2
3.4	Training Requirements .....	3-2
3.5	Accidents and/or Injuries .....	3-2
<b>4.0</b>	<b>SUMMARY OF RECORD DOCUMENTS</b> .....	<b>4-1</b>
<b>5.0</b>	<b>FIELD CHANGES AND CONTRACT MODIFICATIONS</b> .....	<b>5-1</b>
5.1	Field Changes .....	5-1
5.2	Contract Modifications .....	5-1
<b>6.0</b>	<b>SUMMARY OF CHEMICAL AND GEOTECHNICAL TESTING</b> .....	<b>6-1</b>
6.1	Waste Characterization .....	6-1
6.2	Pre-Excavation Screening .....	6-3
6.3	Borrow Pit Analyses .....	6-3
6.4	Confirmation Analyses .....	6-3
<b>7.0</b>	<b>OFF-SITE DISPOSITION OF MATERIAL</b> .....	<b>7-1</b>
<b>8.0</b>	<b>QUALITY CONTROL SUMMARY</b> .....	<b>8-1</b>

### **TABLES**

Table 1.1	Remediation Goals for Operable Unit No. 1
Table 4.1	Submittal Register
Table 6.1	Pre-excavation Screening Analyses
Table 6.2	Summary of Confirmation Analyses
Table 7.1	Summary of Off Site Waste Disposal

### **FIGURES**

Figure 2.1	Topographic Survey of AOC-1
Figure 2.2	Topographic Survey of AOC-2
Figure 2.3	Topographic Survey of AOC-3
Figure 2.4	Topographic Survey of AOC-4
Figure 6.1	Sample Locations at AOC-1
Figure 6.2	Sample Locations at AOC-2
Figure 6.3	Sample Locations at AOC-3
Figure 6.4	Sample Locations at AOC-4

## ***TABLE OF CONTENTS***

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### **APPENDICES**

Appendix A	As-Built Drawings
Appendix B	Photographic Documentation
Appendix C	Waste Manifests
Appendix D	Disposal Certification
Appendix E	QC Analytical Report
Appendix F	Chain-of-Custody
Appendix G	Field Screening Summary Report
Appendix H	QC Documentation
Appendix I	Analytical Data
Appendix I.1	Waste Characterization Data
Appendix I.2	Borrow Pit Data
Appendix I.3	Pre-Excavation Screening Data
Appendix I.4	Confirmation Data

## ***EXECUTIVE SUMMARY***

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From March to December 1995, OHM Remediation Services Corp. (OHM) performed a removal and disposal of pesticide and polychlorinated biphenyl (PCB) contaminated soils contained in Areas of Concern (AOC) 1, 2, 3, and 4 of Sites 21 and 78 on Operable Unit (OU) 1 at Marine Corps Base Camp Lejeune, North Carolina. OHM's project activities involved two distinct phases of work: on-site field screening, and final excavation. Approximately 649.76 tons of pesticide and contaminated soil was shipped off-site for incineration disposal and approximately 160.84 tons of PCB contaminated soil was shipped off-site for disposal in a Subtitle D landfill. Confirmation sampling performed upon completion of excavation activities revealed that soils remaining on-site exhibited levels of pesticide contamination below the cleanup goals identified in the Basis of Design Report dated November 11, 1994 prepared by Baker Environmental, Inc. Cleanup goals for areas that were effected by PCB contamination were modified with the permission of the USEPA to 10 ppm. All soil on-site exhibited levels of PCB below the modified cleanup goal. Site restoration included placement of clean backfill from the Base borrow area and revegetation.

## ***1.0 INTRODUCTION***

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OHM has completed all activities as required under LANTDIV RAC Contract No. N62470-93-D-3032, Delivery Order No. 62 - Remediation of Pesticide and PCB Contaminated Soil in Areas of Concern 1, 2, 3, and 4 at Sites 21 and 78 of Operable Unit 1 at the Marine Corps Base, Camp LeJeune, North Carolina, in accordance with the statement of work and NAVFAC Specification No. 05-94-4827.

This Closeout Report has been prepared in accordance with Specification Section 01010, Paragraph 1.3.1.10 and describes how OHM removed, transported, and disposed of pesticide and PCB contaminated soil at the project sites.

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 MCB Camp LeJeune. The primary purpose of the FFA was to ensure that environmental impacts associated with past and present activities at the Base were thoroughly investigated and appropriate CERCLA and Response/Resource Conservation and Recovery Act (RCRA) Corrective Action alternatives were developed and implemented as necessary to protect public health and the environment.

Camp Lejeune is a training base for the U.S. Marine Corps, located in Onslow County, North Carolina. The base covers approximately 170 square miles and includes 14 miles of coast line. MCB Camp Lejeune is bounded to the southeast by the Atlantic Ocean, to the northeast by State Route 24, and to the west by U.S. Route 17. The town of Jacksonville, North Carolina is located north of the Base. The remedial action area, OU No. 1, is one of 13 operable units within Camp Lejeune, and covers an area of approximately 690 acres and contains Sites 21 and 78. OU No. 1 is located approximately 1 mile east of the New River and two miles south of State Route 24. The Operable Unit is bordered to the northwest by Holcomb Boulevard, to the northeast by Sneads Ferry Road, to the southwest by Main Service Road, and to the southeast by Cogdels Creek.

Site 21 is located within the northwest section of Site 78. The site is bordered by Ash Street to the southwest, Center Road to the southeast, and a wooded area to the northwest. A dirt road surrounds most of the site along with surface drainage ditches. The southern and central portions of the site (approximately 220 feet by 900 feet) include several fenced-in areas, while the northern section (approximately 500 feet long) is an open area. A water tower is located in the fenced portion of the site. Surface cover within the site consists of gravel, sandy soil, and concrete with a few vegetated areas. The southern portion of the site is periodically utilized for storage by Marine Corps reserve units.



Three AOCs are located at Site 21. They are the Former PCB Transformer Disposal Area (AOC 1) and the Former Pesticide Mixing/Disposal Area (AOCs 2 and 3). The Former Transformer PCB Disposal Area is located in the northeastern portion of the site, and the Former Pesticide Mixing/Disposal Area is located in the southwestern portion of the site. With the exception of a small, slightly depressed area at the northern portion of the site, which may have been the former transformer oil disposal pit, there were no visual signs of waste disposal at the site. The contaminants of concern (COCs) at AOC 1 and AOC 2 were PCBs. The COCs at AOC 3 were pesticides, including 4,4'-DDD, 4,4'-DDT, and chlordane.

Site 78 encompasses the industrial area of MCB, Camp Lejeune and is bordered by Holcomb Boulevard, Sneads Ferry Road, Duncan Street, and Main Service Road. This area is comprised of maintenance shops, warehouses, painting shops, printing shops, automobile body shops, and other similar industrial facilities. Site 78 covers approximately 590 acres. With the exception of buildings, the majority of the site area is paved (e.g., roadways, parking lots, loading dock areas, and storage lots), however, there are many small lawn areas associated with individual buildings within the site and along lengthy stretches of roadways. In addition, there are several acres of woods in the southern portion of the site. Recreational ball fields and a parade ground are located in the southwest corner of the site. AOC 4 is within Site 78, a grassed area on the northeast side of Building 1502. The COCs at AOC 4 are pesticides.

Site 21 has had a history of pesticide usage and reported transformer oil disposal. The site was used as a pesticide mixing area and as a cleaning area for pesticide application equipment from 1958 to 1977. This area, the Former Pesticide Mixing/Disposal Area, was reported to be located in the southeast corner of the lot (the exact location is not documented). Chemicals reportedly stored and handled at this site included diazinon, chlordane, lindane, DDT, malathion (46 percent solution), mirex, 2,4-D, silvex, dalapon and dursban. Small spills, discharge of washout fluids, and indiscriminate disposal are believed to have occurred in this area. In 1977, before these mixing/cleaning activities were moved to a different location, overland discharge of washout fluids was estimated to be approximately 350 gallons per week. It is not clear for how long this discharge of washout fluids occurred.

The Former Transformer Oil Disposal Pit was located in the northeastern portion of the site. The pit was reportedly used as a disposal area for transformer oil during a one year period between 1950 and 1951. The pit reportedly measured 25 to 30 feet long by 6 feet wide by 8 feet deep. Sand was occasionally placed in the pit when oil was found standing in the bottom of the pit. The total quantity of oil disposed in this pit is unknown. A small area, slightly depressed in elevation, which may be the former oil pit, was evident in the northern portion of Site 21.

Site 78, constructed in the late 1930s, was the first developed area at MCB, Camp Lejeune. It was comprised of approximately 75 buildings and facilities including maintenance shops, gas stations, administrative offices, commissaries, snack bars, warehouses, and storage yards. There is



presently no known uncontrolled disposal of wastes related to the various industrial activities at the site. Due to the industrial nature of the site, many spills and leaks have occurred over the years. Most of these spills and leaks have consisted of petroleum-related products and solvents from underground storage tanks (USTs), drums, and uncontained waste storage areas.

The remedial objective for soil for this project was to remove and dispose of contaminated soil in OU No. 1, AOC-1, 2, 3, and 4 which had contaminants of concern exceeding the established remediation goals. The remediation goals for this project were provided in the final design package *Basis of Design Report* by Baker Environmental, Inc. dated November 11, 1994 except for PCBs. The remediation goal for PCBs was increased from the a value of 370  $\mu\text{g}/\text{kg}$ , established in the *Basis of Design Report*, to a value of 10,000  $\mu\text{g}/\text{kg}$  through an explanation of significant difference (ESD). The basis of the ESD was the results of the field screening which indicated that a massive volume of soil would have to be disposed. Table 1.1 presents the requirements that were fulfilled for contaminated soil.

<i>Contaminants of Concern</i>	<i>Soil Cleanup Levels (<math>\mu\text{g}/\text{kg}</math>)</i>
4,4'-DDT	8,400
4,4'-DDD	12,000
Chlordane (total)	2,200
PCBs (total)	10,000

## **2.0 SUMMARY OF ACTION**

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Once the Notice to Proceed was received from LANTDIV, OHM commenced preparatory activities for the project such as plan preparation and review for all site activities. The work was broken into definable portions of work for economical and efficient execution of the work. Listed below are phases of the site work that was performed from March to December of 1995 to fulfill the project specifications.

- Phase 1 was the mobilization of all equipment and personnel to the site. This included composite sample collection at each AOC for waste characterization.
- Phase 2 work consisted of delineation of the horizontal and vertical limits of pesticide and PCB contaminated soil by screening and sampling all four AOCs.
- Phase 3 consisted of the excavation, loading, transportation, and disposal of pesticide contaminated areas identified in Phase 2. This also included confirmation analyses to verify all contaminated soil was removed.
- Phase 4 was a modification of the remediation goals for PCBs from 370  $\mu\text{g}/\text{kg}$  to 10,000  $\mu\text{g}/\text{kg}$  by the issuance of an Explanation of Significant Difference (ESD) by the USEPA.
- Phase 5 was the filling with earth and seeding with grass of AOC-4 and covering with gravel of AOC-2 and 3.
- Phase 6 consisted of the excavation, loading, transportation, and disposal of PCB contaminated areas identified in Phase 2. This also included confirmation analyses to verify all contaminated soil was removed.
- Phase 7 was the filling with earth and seeding with grass of AOC-1.
- Phase 8 was the demobilization of all equipment and personnel from the site.

The following sections provide more detail on specific events and topics of the project.

### **2.1 SUBMITTALS**

In March 1995 OHM submitted draft plans for Delivery Order No. 62. The plans consisted of a Remedial Action Work Plan; Construction Quality Control Plan, and Site-Specific Health and Safety Plan. Within these plans were sections which presented information for the Environmental Protection Plan, Sampling and Analysis Plan, and Air Monitoring Plan as required by the specifications. The plans provided a description of the project objectives, schedule, sampling and analysis requirements, decontamination procedures, site work and excavation procedures, construction requirements, and storage, transportation, and removal requirements that would be



implemented to fulfill the requirements of the project specifications. The plans were reviewed by LANTDIV and returned approved on May 30, 1995

## 2.2 MOBILIZATION AND SITE PREPARATION

Activities included the delivery of all equipment and personnel to the project site, construction of all necessary measures for site drainage, siltation, and erosion control. All excavations were diked and diversion ditches constructed to mitigate contaminate migration from the site. Soil samples were collected from various points within each AOC. Each AOC's samples were then composited and composite samples sent to an off-site laboratory for waste characterization analyses. Results of the analyses were submitted to various disposal facilities for pricing. The chosen facilities then prepared waste profiles for submission to the Base for final approval.

## 2.3 DELINEATION OF CONTAMINATED SOIL

A Pre-construction meeting was held on April, 1995 at MCB Camp Lejeune in conjunction with the weekly progress meeting. The areas requiring excavation were surveyed by a licensed surveyor based on the maps provided in the Final Design Specifications. The initial limits of excavation as depicted on the contract drawings were delineated with paint and/or wooden stakes for easy recognition.

To delineate the extent of pesticide and PCB contaminated soil at AOC-1, 2, 3, and 4, and thereby minimize unnecessary soil removal, a field screening program was implemented in May, 1995. The objectives of the program were to:

- Delineate the extent of pesticide and PCB contaminated soil, and
- Quantify the volumes of soils to be excavated

Personnel and analytical equipment to the site for the sampling event. A grid system having points at 10 feet centers in both directions was laid out at each AOC. A sample was collected at each point 6 inches below ground surface. A total of 289 soil grab samples were collected and analyzed by OHM's on-site gas chromatograph (GC) to measure concentrations of the COCs. A copy of the Field Screening Report which includes all the data generated during the screening event is located in Appendix H. On-site activities for pesticide and PCB contaminated soil delineation were conducted from May 1 to 10, 1995.

Once the data was checked and verified to determine that it was complete, correct and adequate, it was assimilated for use. The data was plotted on maps of each AOC so that waste boundaries could be identified indicating the areas affected by each of the COCs. A final boundary was determined which would encompass all soil identified as exceeding the remediation goals. Once



LANTDIV reviewed this information and concurred, the information was then transferred to the field to direct the excavation activities.

#### 2.4 EXCAVATION OF CONTAMINATED SOIL

The results of the field screening were used to establish the limits of excavation for each AOC. Contaminated soils were removed to the depths indicated in the pre-excavation screening and sampling event using a tracked excavator and loaded directly into dump trailers. To mitigate the spread of contaminants off-site, the trucks were decontaminated by brushing the tires and the sides of the truck bed to remove soil and debris prior to leaving the site.

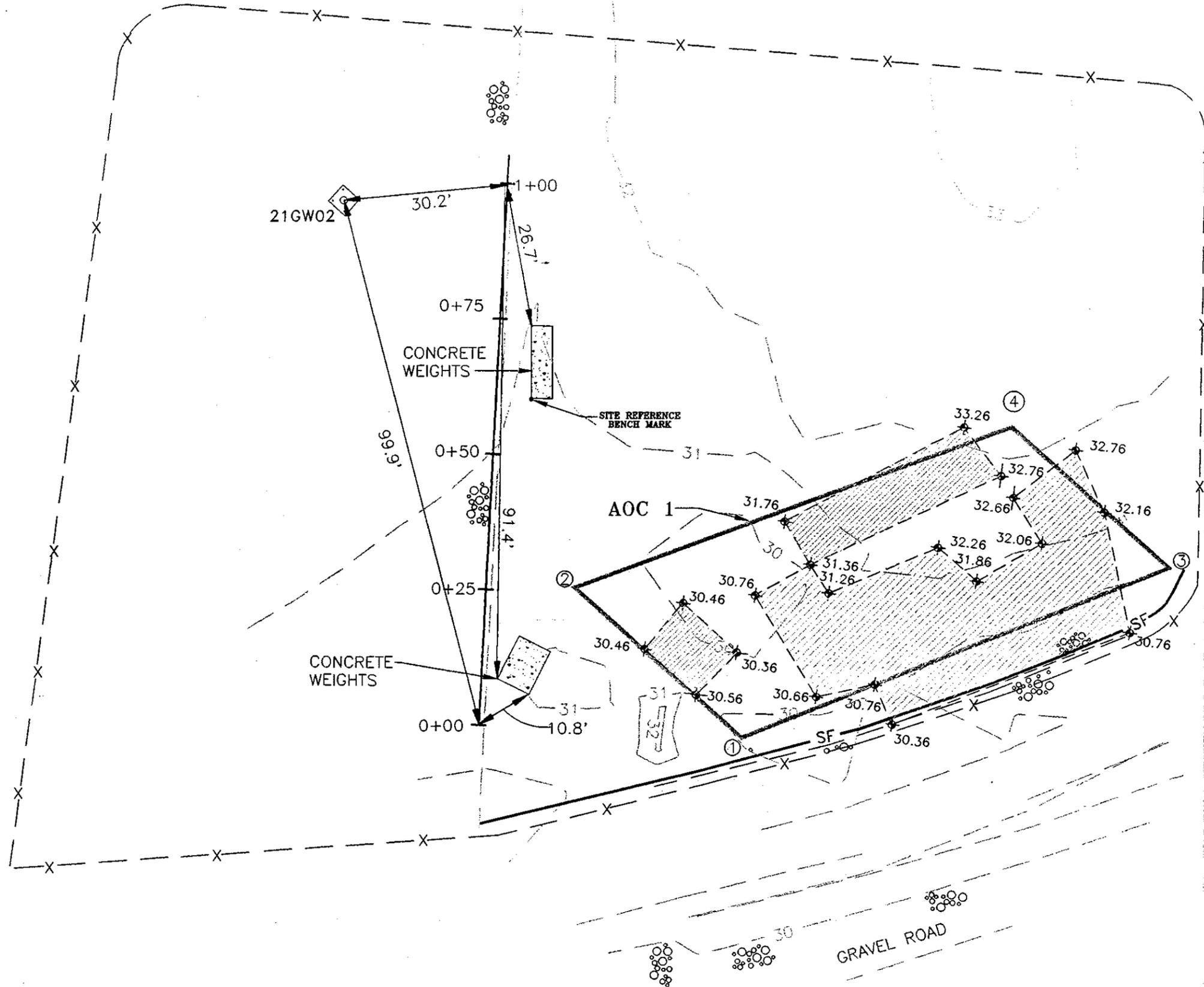
Confirmation sampling of the excavations was conducted in accordance with Section 01430, Paragraph 3.1.1 of the Specifications. The laboratory results of the chemical analyses of the COCs indicate that all pesticide and PCB contaminated soil were removed from all the AOCs .

The excavation activities removed 649.76 tons of pesticide contaminated soil for incineration and 160.84 tons of PCB contaminated soil, 91.82 tons that were incinerated and 68.94 tons that were land disposed in accordance with the ESD approved by the USEPA.

#### 2.5 BACKFILLING AND REVEGETATION

Upon completion of field construction activities, disturbed areas were backfilled with soils from the base borrow area and either seeded with grass or covered with gravel to restore them to pre-excavation conditions. The backfill was compacted utilizing the heavy equipment on-site to the approximate original grade. Areas to be seeded were fertilized to enhance seed growth and then seeded. Areas to be gravel covered were left approximately 3 inches below original grade. Gravel was then placed and compacted to final grade. As-built topographic drawings of the site which depict the excavation limits and final grade elevations are shown in Figures 2.1, 2.2, 2.3, and 2.4.

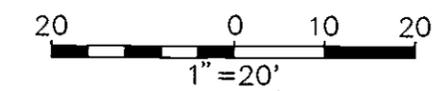
Photographic documentation of the performance of the project activities can be found in Appendix B.



**LEGEND**

- 33.26 \* FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- ORIGINAL AOC-1
- SF — SILT FENCE
- - - ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
①	0+00	48'R
②	0+26.5'	16.5'R
③	0+35'	125'R
④	0+60'	94'R



02341 H01Z

C:\OHM\LEJUNE\AOC1\6866\FIG 2.1.DWG

**OHM Remediation Services Corp.**  
Norcross, Georgia  
A Subsidiary of OHM Corporation

SUBMITTED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PROJECT MANAGER: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SR. PROJECT ENGINEER: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DEPT. MANAGER: \_\_\_\_\_

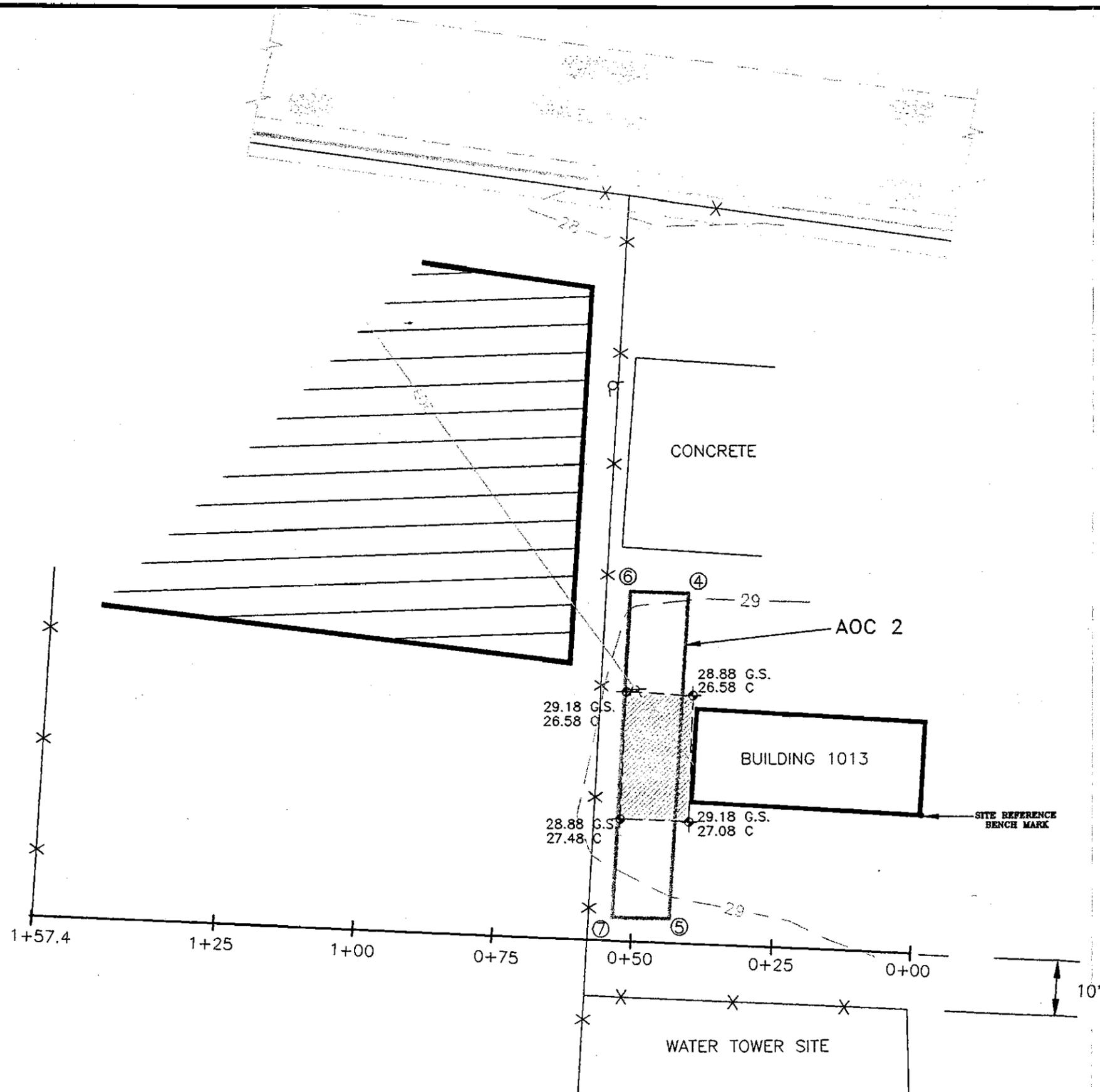
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ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	1	ISSUE FOR REVIEW & APPROVAL	OHM	2/16/96	
	2	AS BUILT	OHM	2/26/96	

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 CHECKED: G. GILLES  
 CHECKED: J. DUNN

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**ATLANTIC DIVISION**  
 NAVAL STATION NORFOLK, VIRGINIA  
 LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062  
 OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJUNE, N.C.

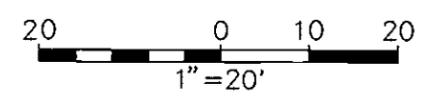
**FIGURE 2.1**  
**TOPOGRAPHIC SURVEY SITE 21**  
**FOR AOC- 1**  
 PREPARED FOR  
 MCB CAMP LEJUNE



**LEGEND**

- 28.88 G.S.  
27.48 C \* FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- [Solid Line] ORIGINAL AOC-1
- [Dashed Line] SF SILT FENCE
- [Dotted Line] ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
④	0+42.5'	62.5'R
⑤	0+43'	4'R
⑥	0+53'	62.0'R
⑦	0+53.5'	4'R



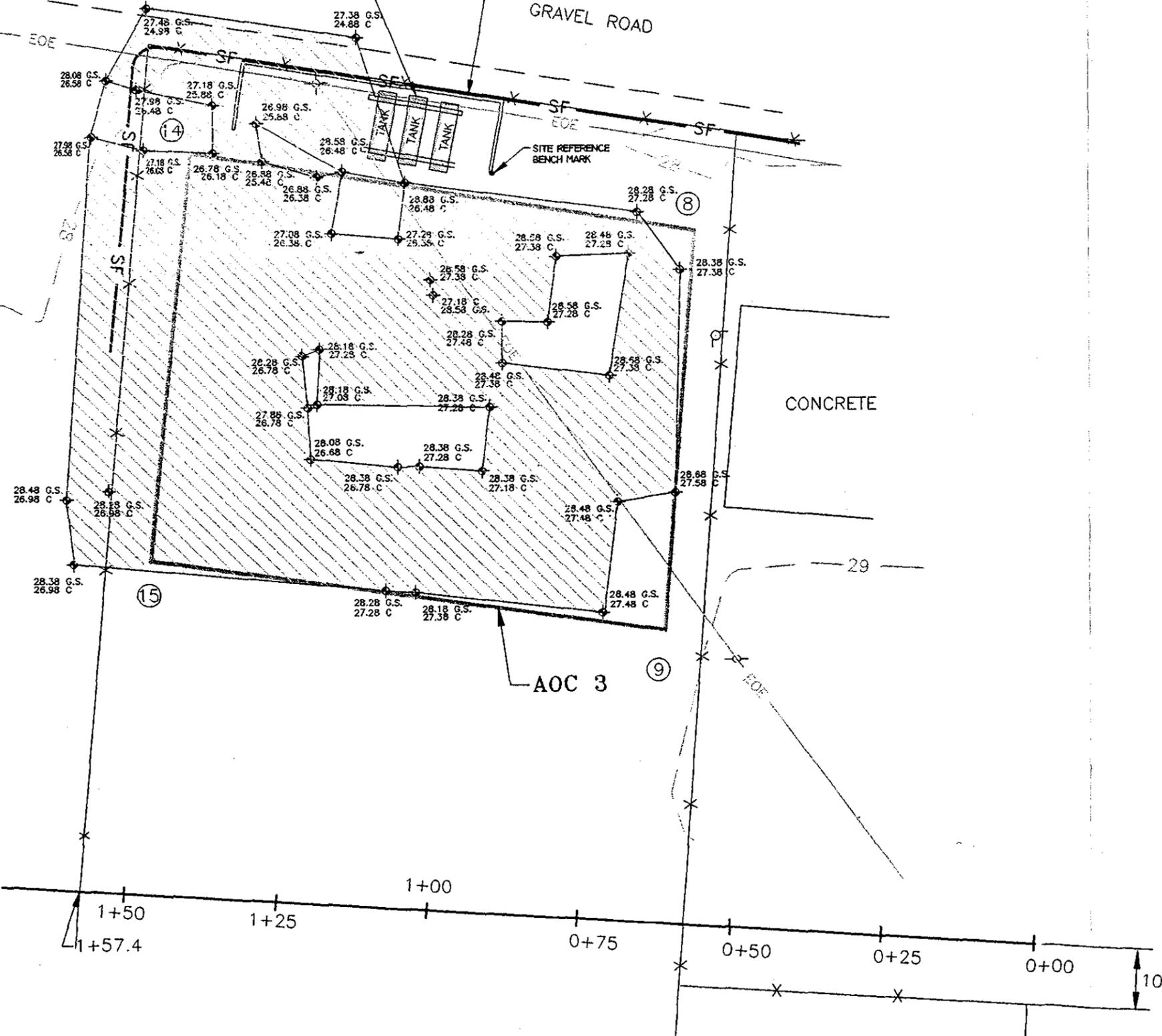
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C:\OHM\LEJEUNE\AOC1\6886\FIG2-3A.DWG

<b>OHM Remediation Services Corp.</b> Norcross, Georgia A Subsidiary of OHM Corporation	AT FULL SCALE (IF NOT 2"=SCALE ACCORDINGLY) CADD FILE: FIG2-3A.DWG DRAWN: J. COLLINS	<b>REVISIONS</b> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>ZONE</th> <th>REV.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>APP.</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>ISSUE FOR REVIEW &amp; APPROVAL</td> <td>OHM</td> <td>2/18/96</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>AS BUILT</td> <td>OHM</td> <td>2/21/96</td> <td></td> </tr> </tbody> </table>	ZONE	REV.	DESCRIPTION	BY	DATE	APP.		1	ISSUE FOR REVIEW & APPROVAL	OHM	2/18/96			2	AS BUILT	OHM	2/21/96		THE INFORMATION OR DATA CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY AND THE PROPERTY OF OHM REMEDIATION SERVICE CORP. (OHM), AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY PRIOR WRITTEN CONSENT OF OHM, COPYRIGHT © OHM REMEDIATION SERVICES CORP., 1994.	DEPARTMENT OF THE NAVY <b>ATLANTIC DIVISION</b> NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION NORFOLK, VIRGINIA LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0082 OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.
	ZONE	REV.	DESCRIPTION	BY	DATE	APP.																
	1	ISSUE FOR REVIEW & APPROVAL	OHM	2/18/96																		
	2	AS BUILT	OHM	2/21/96																		
SUBMITTED: _____ PROJECT MANAGER DATE: _____ APPROVED: _____ SR. PROJECT ENGINEER DATE: _____ APPROVED: _____ DPT. MANAGER DATE: _____	DESIGNED: _____ CHECKED: G. GILLES CHECKED: J. DUNN	FIGURE 2.2 <b>TOPOGRAPHIC SURVEY SITE 21 FOR AOC-2</b> PREPARED FOR MCB CAMP LEJEUNE																				

ABOVE GROUND TANKS  
CONCRETE C&G CONTAINMENT AREA

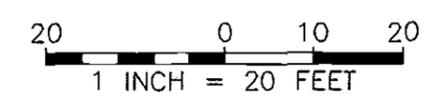
GRAVEL ROAD



**LEGEND**

- 28.38 G.S. ◆ FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- 27.18 C ◆
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- [Thick Line] ORIGINAL AOC-3
- [Dashed Line with X] -SF- SILT FENCE
- [Thin Line] ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
⑧	0+62'	116.5'R
⑨	0+63'	49.5'R
⑭	1+46'	125'R
⑮	1+49'	56'R



02341H032

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Norcross, Georgia  
A Subsidiary of OHM Corporation

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APPROVED: \_\_\_\_\_ DEPT. MANAGER DATE: \_\_\_\_\_

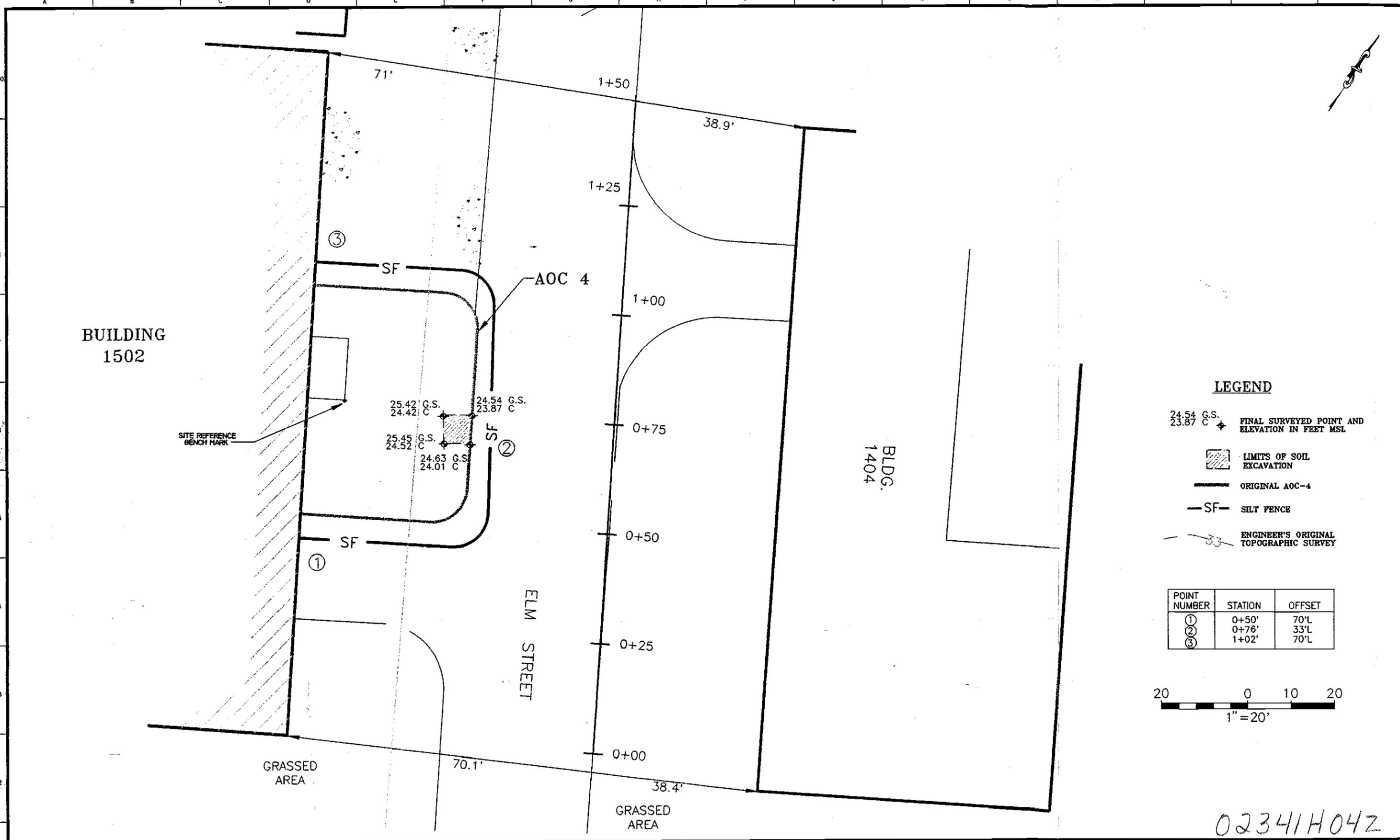
AT FULL SCALE (IF NOT 1"=SCALE ACCORDINGLY)		REVISIONS		BY	DATE	APP.
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**ATLANTIC DIVISION**  
NAVAL STATION NORFOLK, VIRGINIA  
LANTRDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062  
OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.

**FIGURE 2.3**  
**TOPOGRAPHIC SURVEY SITE 21**  
**FOR AOC-3**  
PREPARED FOR  
MCB CAMP LEJEUNE

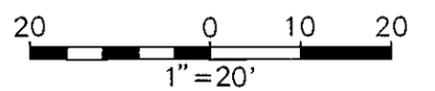
D:\OHM\LEJEUNE\AOC\16866\FIG2-2.DWG



**LEGEND**

- 24.54 G.S.  
23.87 C ◆ FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- [Thick Line] ORIGINAL AOC-4
- [Dashed Line] SF SILT FENCE
- [Thin Line] ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
①	0+50'	70'L
②	0+76'	33'L
③	1+02'	70'L



02341H04Z

D:\OHM\LEJEUNE\AOC\_18868\FIG2-4.DWG

<b>OHM Remediation Services Corp.</b> Norcross, Georgia A Subsidiary of OHM Corporation	AT FULL SCALE (IF NOT 2" = SCALE ACCORDINGLY)	REVISIONS	THE INFORMATION OR DATA CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY AND THE PROPERTY OF OHM REMEDIATION SERVICE CORP. (OHM), AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY PRIOR WRITTEN CONSENT OF OHM. COPYRIGHT © OHM REMEDIATION SERVICES CORP., 1994.	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND <b>ATLANTIC DIVISION</b> NAVAL STATION NORFOLK, VIRGINIA LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062 OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.	FIGURE 2.4 TOPOGRAPHIC SURVEY SITE 78 FOR AOC-4 PREPARED FOR MCB CAMP LEJEUNE																	
	SUBMITTED: _____ DATE: _____ APPROVED: _____ DATE: _____ APPROVED: _____ DATE: _____	DESIGNED: _____ CHECKED: G. GILLES CHECKED: J. DUNN	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ZONE</th> <th>REV.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>APP.</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>ISSUE FOR REVIEW &amp; APPROVAL</td> <td>OHM</td> <td>3/1/95</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>AS BUILT</td> <td>OHM</td> <td>2/21/96</td> <td></td> </tr> </tbody> </table>	ZONE	REV.	DESCRIPTION	BY	DATE	APP.		1	ISSUE FOR REVIEW & APPROVAL	OHM	3/1/95			2	AS BUILT	OHM	2/21/96		
ZONE	REV.	DESCRIPTION	BY	DATE	APP.																	
	1	ISSUE FOR REVIEW & APPROVAL	OHM	3/1/95																		
	2	AS BUILT	OHM	2/21/96																		

### **3.0 FINAL HEALTH AND SAFETY REPORT**

#### **3.1 MOBILIZATION AND SITE PREPARATION**

The site set-up for Camp Lejeune, North Carolina, included the following:

- Utilization of previously established on-site command center
- Prior to the start of on-site operations, all on-site personnel read, understood and signed the Site-Specific Health and Safety Plan (HASP) and in accordance with OSHA requirements, the following items were set-up on-site:
  - An employee Right-To-Know poster and station
  - Material Safety Data Sheets (MSDSs) for all on-site chemicals
  - A hospital route and map was posted in the command center, and a copy placed in the glove compartments of all site vehicles
  - The site-specific evacuation plan was posted in the command center
  - Exit signs were posted in the command center

#### **3.2 ON-SITE OPERATIONS**

The remediation of pesticide and PCB contaminated soil at Camp Lejeune, North Carolina, included:

- Site sampling
- Excavation and load-out of pesticide and PCB contaminated soil for off-site disposal
- Backfill and site restoration

Prior to excavation of the pesticide and PCB contaminated soil for off-site disposal, all utility companies were notified to locate their lines, if any, in the area. Water was made available on-site for dust control measures.

Site sampling of soils was accomplished using a stainless steel auger. The contents of the auger were dumped into a stainless steel bowl and any mixing was accomplished with a stainless steel spoon. Protective clothing required for this task included MSA air purifying respirator with attached MSA GMC-H type cartridges, tyvek and hood, sample gloves, hard hat, steel toe shoes, and vinyl booties. Safety issues stressed during work activities included good housekeeping and heat stress.

The excavation task required protective clothing including MSA full-face air purifying respirators with attached MSA GMC-H type cartridges, tyvek and hood, hard hat, safety, safety glasses, steel-toed safety shoes and vinyl booties. Issues stressed during work activities included good housekeeping, heat stress, a communication system for site personnel, and shoring and trenching requirements.



Backfill operations and gravel placement or grass seeding were performed to restore the site. These tasks required protective clothing including hard hat, safety glasses, steel toe boots and cotton gloves. Safety issues stressed during work activities included good housekeeping, heat stress, and communication system for site personnel.

### **3.3 AIR MONITORING**

Air monitoring of the breathing zone was performed continuously for volatile organic compounds (VOC) and dust during the excavation and loading of the waste. A photoionization detector (PID) was used to identify the VOCs and a Mini-Ram was used to identify air borne particulates. As outlined in the HASP air monitoring readings and calibration data for the instruments were recorded and documented. The results indicate that no concentrations of dust or VOCs above background levels were identified in workers breathing zone during the excavation and loading or the sampling activities. No upgrades of protection were necessary during the course of the project.

### **3.4 TRAINING REQUIREMENTS**

All employees, subcontractors and site visitors allowed access to work areas were required to have completed the 40-hour health and safety training course for Hazardous Waste Site Operations in accordance with 29 CFR 1910.120 and had to read, understand and sign the HASP.

### **3.5 ACCIDENTS AND/OR INJURIES**

The project was completed without an OSHA Reportable Accident or Lost Time Injury.

#### ***4.0 SUMMARY OF RECORD DOCUMENTS***

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A tabular summary of the record documents submitted to the Navy Technical Representative for Delivery Order 62 is on included in Table 4.1. Documentation associated with quality control and its frequency of submission are located in Section 8.0.



## ***5.0 FIELD CHANGES AND CONTRACT MODIFICATIONS***

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### **5.1 FIELD CHANGES**

During field operations, weekly quality control (QC) meetings were held with the Navy Technical Representative (NTR). During these meetings, items of concern and project status were discussed. Also during the QC meetings, field changes were discussed and implemented when conditions dictated. The following is a summary of changes agreed to by OHM and the Navy with a brief explanation:

- **Pre-Excavation Soil Sampling and Field Analyses**  
Pre-excavation soil sampling and analyses was added to the scope of work. Samples were procured and analyzed in the field laboratory using a gas chromatograph.
- **Protection Level of Sampling Personnel**  
The protection level for sampling personnel was changed from Level C to Modified Level D based on continuous air monitoring in accordance with the instructions of the Health and Safety Officer.
- **Compaction of Backfill**  
The backfill compaction requirements were modified to a performance specification requiring a minimum of three passes of the equipment on-site. No testing compaction was performed.
- **Weekly Health and Safety Summary**  
OHM submitted daily Health and Safety Reports for on-site operations in lieu of the weekly summary report.
- **Silt Fence**  
Silt fencing was eliminated from upgradient areas and placed only at locations downgradient of excavation operations to prevent erosion from run-off of stormwater and sedimentation off-site.
- **Vehicle Decontamination**  
Pressure washing of vehicles/containers leaving the site was changed to a dry brush decontamination to reduce the volume of waste water generated by decontamination.
- **Contractor Production Reports**  
The Contractor Production Report requirement was waived by the NTR and replaced by our daily PTS report with narrative.



## 5.2 CONTRACT MODIFICATIONS

Two contract modifications were submitted and approved for Delivery Order 62. The initial modification, Modification No. 1, was submitted on February 15, 1995 in the amount of \$737,120.00 for excavation and disposal of PCB and pesticide contaminated soil from four AOCs within the industrial complex. This modification covered the scope of work as depicted in the specifications and Basis of Design. The second modification, Modification No. 2 submitted and approved on August 31, 1995 in the amount of \$138,755.00, addressed additional transportation and disposal charges due to excavation required beyond the initial limits, unit weight variance of the waste that was excavated, and a pre-excavation sampling and screening event.

## **6.0 SUMMARY OF CHEMICAL AND GEOTECHNICAL TESTING**

During the course of the project chemical analyses of the site soils were used to direct the excavation activities and to ensure that the project requirements were fulfilled. There were various sampling and analytical events that were conducted to achieve the project goals. Listed below are the chemical analytical events that were conducted for this project.

- Waste Characterization by an off site laboratory of composite soil samples from AOCs 1, 2, 3, and 4 for the disposal facilities parameters
- Pre-excavation Screening by on site equipment of grab soil samples from all AOCs for PCBs and pesticides
- Confirmation analyses by an off site laboratory of a composite sample from the borrow pit for the COCs.
- Confirmation analyses by an off site laboratory of discrete soil samples from AOCs 1, 2, 3, and 4 for the COCs of each individual location

The following paragraphs discuss the general results of the sampling events and what actions were taken based on those results.

### **6.1 WASTE CHARACTERIZATION**

Prior to the excavation of any of the sites a OHM technician collected composite samples from each of the AOCs. Each composite sample consisted of six grab samples from an AOC which were mixed into an homogenous mass. The four samples were labeled as follows:

<b>Location</b>	<b>Label</b>
AOC - 1	CLJAOC1001
AOC - 2	CLJAOC2001
AOC - 3	CLJAOC3001
AOC - 4	CLJAOC4001

They were then documented, preserved and shipped overnight to OHM's Analytical Division Laboratory in Findlay, Ohio where they were analyzed as follows:



Parameter	Reference	Method
Total Solids Contents	MCAWW	160.3
Paint Filter Test	SW-846	9095
<i>RCRA Characteristics</i>		
pH	SW-846	9045
Reactive Sulfide	SW-846	7.3.4.2
Flash Point, Seta Flash	SW-846	1020
Reactive Cyanide	SW-846	7.3.3.2
<i>Metals</i>		
Total Metals	SW-846	6010
Mercury by Cold Vapor	SW-846	7471
Arsenic by GFAA	SW-846	7060
Selenium by GFAA	SW-846	7740
Thallium by GFAA	SW-846	7841
<i>Organics</i>		
Pesticides and PCBs	SW-846	8080
Volatile Compounds by GCMS	SW-846	8240
Semi-volatile Compounds by GCMS	SW-846	8270
<i>RCRA TCLP</i>		
Leachate Preparation	SW-846	1311
Herbicides by GC	SW-846	8150
Pesticides by GC	SW-846	8080
Metals	SW-846	6010
Mercury by Cold Vapor	SW-846	7470
Semi-volatile Compounds by GCMS	SW-846	8270
Volatile Compounds by GCMS	SW-846	8240

The complete results and data sheets for these analyses are included in this report as Appendix I.1. This information was forwarded to identified disposal facilities for disposal approval. Based on these results, the disposal facilities approved the disposal of the PCB contaminated soil by incineration at Chemical Waste Managements, Inc.'s facility in Port Arthur, Texas and landfilling at BFI, Inc. facility in Sampson County, North Carolina and the pesticide contaminated soil by incineration at LWD, Inc.'s facility in Calvert City, Kentucky.



## 6.2 PRE-EXCAVATION SCREENING

The remediation goals for PCBs for the project were originally set at 370 µg/kg. The volume of soil that would have had to be removed to achieve this goal was prohibitive. The remediation goal was modified to 10,000 µg/kg via an ESD and additional screening of the AOCs was proposed to more accurately identify the volumes of soil at each AOC that would be removed for disposal.

To perform the screening, a grid system with points at 10 feet centers was laid out on each AOC. The sample locations for each of the AOCs are shown in Figures 6.1, 6.2, 6.3, and 6.4. Grab samples were collected at each point 6 inches below ground surface and analyzed at site with a gas chromatograph for PCBs and pesticides by Method 8080. Grab samples were analyzed on the grid system in all directions until results indicated that the soil did not contain any of the COCs at levels above the remediation goals. Over a ten day period, 289 samples were collected and analyzed at the site. A summary of the results of these analyses are shown in Table 6.1 and the data is included in Appendix I.3. The screening event produced estimated boundaries of contaminated soil exceeding the remediation goals for each of the AOCs. These boundaries are depicted in Figures 6.1, 6.2, 6.3, and 6.4.

## 6.3 BORROW PIT ANALYSES

To fill the excavations from the removal of pesticide and PCB contaminated soil fill material was hauled from an off site borrow pit which was located on the Base. Analytical data for the borrow material was provided by the Base and is included in this report as Appendix I.2.

For compaction control of fill material that was placed into the open excavations once they were confirmed clean, soil samples were collected from the Base borrow pit. Soil and Materials Engineers collected a soil sample, identified as S-1, and performed a Standard Proctor Test in accordance with ASTM D698 and a sieve analysis in accordance with ASTM C136. The tan slightly silty fine to medium SAND exhibited a Standard Proctor maximum dry density of 104.7 pounds per cubic foot at an optimum moisture content of 15.8 percent. The sieve analysis yielded the following gradation.

<i>Sieve Size (U. S. Sieve Size)</i>	<i>Percent Passing by Weight</i>
#4 .....	100.00
#10 .....	100.00
#40 .....	98.9
#80 .....	48.1
#200 .....	9.2

The data generated from these analyses are included in Appendix I.3.



#### 6.4 CONFIRMATION ANALYSES

After excavation of the soil identified in the screening event, 70 confirmation samples were collected for laboratory analyses in accordance with Section 7 of the Remedial Action Work Plan to ensure that all soil contaminated with pesticides and PCBs at concentrations greater than the remediation goals had been removed. To ensure that all contaminated soil had been excavated prior to the collection of conformation samples destined for the off site laboratory, duplicate samples were collected for on site analysis by Method 8080. These on site duplicates were analyzed while preserving the samples destined for the laboratory. Any samples that indicated concentrations of the COCs greater than the remedial goals were identified and re-excavated and the sampling process was repeated until a sample from the area generated results that would meet the remediation goals.

Once the samples destined for the laboratory had been identified and were collected, they were preserved for transport and shipped by overnight courier to OHM Analytical Services in Findlay, Ohio for AOC-1 and PACE Laboratories, Inc. in Hampton, New Hampshire for AOC-2, 3, and 4 samples. The samples were analyzed in the laboratory for pesticides and PCBs by Method 8080. The results of the confirmation analyses indicate that no samples contained any COCs in excess of the remediation goals and that further excavation was not necessary. A summary of the confirmation data is contained in Table 6.2 and the laboratory data sheets are included in this report as Appendix I.4.

Table 6.1  
 PESTICIDE/PCB RESULTS JOB#16866  
 Field Screening  
 AOC 1

Sample Name	Sample Location	Date Sampled	Pest/PCBs	4,4'-DDT ug/Kg	4,4'-DDD ug/Kg	Chlordane ug/Kg	Aro-1260 mg/Kg
CLJ62-A1S-001	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	5.5
CLJ62-A1S-002	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	<0.3
CLJ62-A1S-003	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	33.5
CLJ62-A1S-004	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	0.5
CLJ62-A1S-005	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	2.4
CLJ62-A1S-006	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	<0.3
CLJ62-A1S-007	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	0.5
CLJ62-A1S-008	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	0.4
CLJ62-A1S-009	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	5.5
CLJ62-A1S-010	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	0.4
CLJ62-A1S-010D	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	<0.3
CLJ62-A1S-011	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	0.4
CLJ62-A1S-012	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	2.1
CLJ62-A1S-013	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	1.3
CLJ62-A1S-014	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	13.5
CLJ62-A1S-015	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	14.5
CLJ62-A1S-016	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	2.0
CLJ62-A1S-017	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	14.4
CLJ62-A1S-018	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	3.7
CLJ62-A1S-019	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	15.3
CLJ62-A1S-020	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	9.5
CLJ62-A1S-020D	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	11.7
CLJ62-A1S-021	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	10.9
CLJ62-A1S-022	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	5.1
CLJ62-A1S-023	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	20.0
CLJ62-A1S-024	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	10.3
CLJ62-A1S-025	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	9.9
CLJ62-A1S-026	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	2.2
CLJ62-A1S-027	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	4.5
CLJ62-A1S-028	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	18.4
CLJ62-A1S-029	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	10.4

<u>Sample Name</u>	<u>Sample Location</u>	<u>Date Sampled</u>	<u>Pest/PCBs</u>	<u>4,4'-DDT ug/Kg</u>	<u>4,4'-DDD ug/Kg</u>	<u>Chlordane ug/Kg</u>	<u>Aro-1260 mg/Kg</u>
CLJ62-A1S-030	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	1.1
CLJ62-A1S-030D	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	1.5
CLJ62-A1S-031	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	4.8
CLJ62-A1S-032	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	13.2
CLJ62-A1S-033	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	4.4
CLJ62-A1S-034	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	1.6
CLJ62-A1S-035	AOC 1, PCB	5/2/95	PCB'S	NA	NA	NA	17.4
CLJ62-A1S-036	AOC 1, PCB	5/3/95	PCB'S	NA	NA	NA	8.2
CLJ62-A1S-036D	AOC 1, PCB	5/3/95	PCB'S	NA	NA	NA	11.7
CLJ62-A1S-014-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-016-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	1.9
CLJ62-A1S-017-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	0.6
CLJ62-A1S-019-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	2.6
CLJ62-A1S-022-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-024-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	5.1
CLJ62-A1S-025-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	1.5
CLJ62-A1S-027-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	4.4
CLJ62-A1S-033-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-035-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-037-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-038-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-039-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-040-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-041-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	4.2
CLJ62-A1S-042-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	1.2
CLJ62-A1S-043-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	3.9
CLJ62-A1S-044-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	2.6
CLJ62-A1S-045-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	1.9
CLJ62-A1S-046-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	1.0
CLJ62-A1S-047-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	7.1
CLJ62-A1S-048-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	2.2
CLJ62-A1S-049-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	1.2
CLJ62-A1S-050-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	3.3
CLJ62-A1S-051-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	7.4
CLJ62-A1S-052-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	2.6

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A1S-053-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	2.7
CLJ62-A1S-054-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	4.9
CLJ62-A1S-055-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	6.4
CLJ62-A1S-056-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	3.2
CLJ62-A1S-057-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	0.5
CLJ62-A1S-058-1	AOC 1, PCB, 1'	5/15/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-059-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	5.6
CLJ62-A1S-060-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	5.1
CLJ62-A1S-061-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	9.0
CLJ62-A1S-062-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	8.2
CLJ62-A1S-063-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	2.6
CLJ62-A1S-064-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-065-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	4.1
CLJ62-A1S-066-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	3.3
CLJ62-A1S-067-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	1.3
CLJ62-A1S-068-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-069-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	1.6
CLJ62-A1S-070-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	5.8
CLJ62-A1S-071-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	5.8
CLJ62-A1S-072-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-073-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-074-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-075-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-076-1	AOC 1, PCB, 1'	5/18/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-076-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-077-1	AOC 1, PCB, 1'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-077-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-078-1	AOC 1, PCB, 1'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-003-1	AOC 1, PCB, 1'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-003-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-059-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-060-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	4.9
CLJ62-A1S-061-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-062-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	8.3
CLJ62-A1S-065-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	<0.7

<u>Sample Name</u>	<u>Sample Location</u>	<u>Date Sampled</u>	<u>Pest/PCBs</u>	<u>4.4'-DDT ug/Kg</u>	<u>4.4'-DDD ug/Kg</u>	<u>Chlordane ug/Kg</u>	<u>Aro-1260 mg/Kg</u>
CLJ62-A1S-066-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-070-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	5.8
CLJ62-A1S-071-2	AOC 1, PCB, 2'	5/19/95	PCB's	NA	NA	NA	2.0
CLJ62-A1S-079-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-080-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-081-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	2.0
CLJ62-A1S-082-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	0.3
CLJ62-A1S-083-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-084-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-085-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	1.5
CLJ62-A1S-086-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	0.8
CLJ62-A1S-087-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	4.8
CLJ62-A1S-088-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	5.2
CLJ62-A1S-089-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	1.1
CLJ62-A1S-090-1	AOC 1, PCB, 1'	5/23/95	PCB's	NA	NA	NA	3.3
CLJ62-A1S-025-3	AOC 1, PCB, 3'	5/23/95	PCB's	NA	NA	NA	2.8
CLJ62-A1S-061-3	AOC 1, PCB, 3'	5/23/95	PCB's	NA	NA	NA	<0.7
CLJ62-A1S-047-3	AOC 1, PCB, 3'	5/23/95	PCB's	NA	NA	NA	1.5
CLJ62-A1S-062-3	AOC 1, PCB, 3'	5/23/95	PCB's	NA	NA	NA	<0.7

*Clean-up Criteria*

*Soil*

8400

12000

2200

0.37

ND = not detected

NA = not analyzed

Table 6.1  
 PESTICIDE/PCB RESULTS JOB#16866  
 Field Screening  
 AOC 2

Sample Name	Sample Location	Date Sampled	Pest/PCBs	4,4'-DDT ug/Kg	4,4'-DDD ug/Kg	Chlordane ug/Kg	Aro-1260 mg/Kg
CLJ62-A2S-001	AOC 2, Pest	5/1/95	Pesticides	494	ND	752	NA
CLJ62-A2S-002	AOC 2, Pest	5/1/95	Pesticides	406	129	728	NA
CLJ62-A2S-003	AOC 2, Pest	5/1/95	Pesticides	<1000	11250	394	ND
CLJ62-A2S-003D	AOC 2, Pest	5/1/95	Pesticides	7190	15030	510	ND
CLJ62-A2S-004	AOC 2, Pest	5/1/95	Pesticides	5550	9510	758	ND
CLJ62-A2S-005	AOC 2, Pest	5/1/95	Pesticides	1065	645	468	ND
CLJ62-A2S-006	AOC 2, Pest	5/1/95	Pesticides	2213	591	827	ND
CLJ62-A2S-003-1	AOC 2, Pest, 1'	5/10/95	Pesticides	<1000	1136	<2000	NA
CLJ62-A2S-004-1	AOC 2, Pest, 1'	5/10/95	Pesticides	<1000	<1000	<2000	NA

*Clean-up Criteria*      *Soil*                      8400      12000      2200      0.37

ND = not detected  
 NA = not analyzed

Table 6.1  
 PESTICIDE/PCB RESULTS JOB#16866  
 Field Screening  
 AOC 3

Sample Name	Sample Location	Date Sampled	Pest/PCBs	4,4'-DDT ug/Kg	4,4'-DDD ug/Kg	Chlordane ug/Kg	Aro-1260 mg/Kg
CLJ62-A3S-001	AOC 3, Pest	5/4/95	Pesticides	<1000	<1000	<2000	ND
CLJ62-A3S-002	AOC 3, Pest	5/4/95	Pesticides	27060	12760	16647	ND
CLJ62-A3S-003	AOC 3, Pest	5/4/95	Pesticides	14400	7680	<2000	ND
CLJ62-A3S-004	AOC 3, Pest	5/4/95	Pesticides	16333	2306	2388	ND
CLJ62-A3S-005	AOC 3, Pest	5/4/95	Pesticides	>50000	10093	7860	ND
CLJ62-A3S-006	AOC 3, Pest	5/4/95	Pesticides	12872	19589	22923	ND
CLJ62-A3S-007	AOC 3, Pest	5/4/95	Pesticides	26477	8428	<2000	ND
CLJ62-A3S-008	AOC 3, Pest	5/4/95	Pesticides	>50000	10093	<2000	ND
CLJ62-A3S-009	AOC 3, Pest	5/4/95	Pesticides	>50000	>50000	6079	ND
CLJ62-A3S-010	AOC 3, Pest	5/4/95	Pesticides	1527	2264	2155	ND
CLJ62-A3S-010D	AOC 3, Pest	5/4/95	Pesticides	690	596	1961	ND
CLJ62-A3S-011	AOC 3, Pest	5/4/95	Pesticides	21750	1639	<2000	ND
CLJ62-A3S-012	AOC 3, Pest	5/4/95	Pesticides	7500	3318	8364	ND
CLJ62-A3S-013	AOC 3, Pest	5/4/95	Pesticides	28444	3556	3704	ND
CLJ62-A3S-014	AOC 3, Pest	5/4/95	Pesticides	8751	3314	9559	ND
CLJ62-A3S-015	AOC 3, Pest	5/4/95	Pesticides	2738	26548	<2000	ND
CLJ62-A3S-016	AOC 3, Pest	5/4/95	Pesticides	>50000	17224	<2000	ND
CLJ62-A3S-017	AOC 3, Pest	5/4/95	Pesticides	>50000	>50000	<2000	ND
CLJ62-A3S-018	AOC 3, Pest	5/4/95	Pesticides	>50000	18705	5088	ND
CLJ62-A3S-019	AOC 3, Pest	5/4/95	Pesticides	36029	5543	5514	ND
CLJ62-A3S-020	AOC 3, Pest	5/4/95	Pesticides	47417	8500	<2000	ND
CLJ62-A3S-020D	AOC 3, Pest	5/4/95	Pesticides	17236	5009	<2000	ND
CLJ62-A3S-021	AOC 3, Pest	5/4/95	Pesticides	2560	1226	<2000	ND
CLJ62-A3S-022	AOC 3, Pest	5/4/95	Pesticides	5915	4127	<2000	ND
CLJ62-A3S-023	AOC 3, Pest	5/4/95	Pesticides	5726	4615	<2000	ND
CLJ62-A3S-024	AOC 3, Pest	5/4/95	Pesticides	4139	>50000	4639	ND
CLJ62-A3S-025	AOC 3, Pest	5/4/95	Pesticides	7667	30815	<2000	ND
CLJ62-A3S-026	AOC 3, Pest	5/4/95	Pesticides	>50000	9490	<2000	ND
CLJ62-A3S-027	AOC 3, Pest	5/4/95	Pesticides	>50000	>50000	6891	ND
CLJ62-A3S-028	AOC 3, Pest	5/4/95	Pesticides	13096	21173	13197	ND
CLJ62-A3S-029	AOC 3, Pest	5/4/95	Pesticides	22882	4664	3482	ND

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A3S-030	AOC 3, Pest	5/4/95	Pesticides	8213	5973	10364	ND
CLJ62-A3S-030D	AOC 3, Pest	5/4/95	Pesticides	3914	3429	7300	ND
CLJ62-A3S-031	AOC 3, Pest	5/4/95	Pesticides	1563	1354	3681	ND
CLJ62-A3S-032	AOC 3, Pest	5/4/95	Pesticides	756	24000	<2000	ND
CLJ62-A3S-033	AOC 3, Pest	5/4/95	Pesticides	3962	21731	<2000	ND
CLJ62-A3S-034	AOC 3, Pest	5/4/95	Pesticides	2112	1670	<2000	ND
CLJ62-A3S-035	AOC 3, Pest	5/5/95	Pesticides	7748	>50000	<2000	ND
CLJ62-A3S-036	AOC 3, Pest	5/5/95	Pesticides	32150	>50000	<2000	ND
CLJ62-A3S-037	AOC 3, Pest	5/5/95	Pesticides	21297	>50000	25325	ND
CLJ62-A3S-038	AOC 3, Pest	5/5/95	Pesticides	1479	9600	<2000	ND
CLJ62-A3S-039	AOC 3, Pest	5/5/95	Pesticides	1657	2803	<2000	ND
CLJ62-A3S-040	AOC 3, Pest	5/5/95	Pesticides	1579	>50000	2000	ND
CLJ62-A3S-040D	AOC 3, Pest	5/5/95	Pesticides	2294	>50000	3088	ND
CLJ62-A3S-041	AOC 3, Pest	5/5/95	Pesticides	1908	>50000	6077	ND
CLJ62-A3S-042	AOC 3, Pest	5/5/95	Pesticides	1314	3065	<2000	ND
CLJ62-A3S-043	AOC 3, Pest	5/5/95	Pesticides	>50000	4296	5444	ND
CLJ62-A3S-044	AOC 3, Pest	5/5/95	Pesticides	20352	>50000	4031	ND
CLJ62-A3S-045	AOC 3, Pest	5/5/95	Pesticides	7944	>50000	>50000	ND
CLJ62-A3S-046	AOC 3, Pest	5/5/95	Pesticides	3925	>50000	11962	ND
CLJ62-A3S-047	AOC 3, Pest	5/5/95	Pesticides	1347	3698	<2000	ND
CLJ62-A3S-048	AOC 3, Pest	5/5/95	Pesticides	14444	3333	<2000	ND
CLJ62-A3S-049	AOC 3, Pest	5/5/95	Pesticides	781	7229	<2000	ND
CLJ62-A3S-050	AOC 3, Pest	5/5/95	Pesticides	2346	>50000	<2000	ND
CLJ62-A3S-050D	AOC 3, Pest	5/5/95	Pesticides	<1000	>50000	<2000	ND
CLJ62-A3S-051	AOC 3, Pest	5/5/95	Pesticides	667	28528	<2000	ND
CLJ62-A3S-052	AOC 3, Pest	5/5/95	Pesticides	25425	3075	<2000	ND
CLJ62-A3S-053	AOC 3, Pest	5/5/95	Pesticides	1475	>50000	<2000	ND
CLJ62-A3S-054	AOC 3, Pest	5/5/95	Pesticides	1889	38917	<2000	ND
CLJ62-A3S-055	AOC 3, Pest	5/5/95	Pesticides	<1000	<1000	<2000	ND
CLJ62-A3S-056	AOC 3, Pest	5/5/95	Pesticides	4200	13600	<2000	ND
CLJ62-A3S-057	AOC 3, Pest	5/5/95	Pesticides	5778	8889	<2000	ND
CLJ62-A3S-058	AOC 3, Pest	5/5/95	Pesticides	1892	>50000	<2000	ND
CLJ62-A3S-059	AOC 3, Pest	5/5/95	Pesticides	<1000	>50000	2541	ND
CLJ62-A3S-060	AOC 3, Pest	5/5/95	Pesticides	<1000	>50000	5363	ND
CLJ62-A3S-060D	AOC 3, Pest	5/5/95	Pesticides	<1000	>50000	<2000	ND

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4.4'-DDT ug/Kg</b>	<b>4.4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A3S-061	AOC 3, Pest	5/5/95	Pesticides	39796	>50000	11343	ND
CLJ62-A3S-062	AOC 3, Pest	5/5/95	Pesticides	>50000	25059	3529	ND
CLJ62-A3S-063	AOC 3, Pest	5/5/95	Pesticides	>50000	3218	<2000	ND
CLJ62-A3S-063D	AOC 3, Pest	5/5/95	Pesticides	>50000	2016	<2000	ND
CLJ62-A3S-002-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-011-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-012-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-013-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-014-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-015-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-019-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-020-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-024-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-028-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-029-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-032-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-033-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-037-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	8317	<2000	NA
CLJ62-A3S-046-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-048-1	AOC 3, Pest, 1'	5/11/95	Pesticides	1714	<1000	<2000	NA
CLJ62-A3S-050-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-051-1	AOC 3, Pest, 1'	5/11/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-004-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-004-2	AOC 3, Pest, 2'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-006-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-006-2	AOC 3, Pest, 2'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-009-2	AOC 3, Pest, 2'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-009-3	AOC 3, Pest, 3'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-057-2	AOC 3, Pest, 2'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-057-3	AOC 3, Pest, 3'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-036-2	AOC 3, Pest, 2'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-036-3	AOC 3, Pest, 3'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-060-2	AOC 3, Pest, 2'	5/12/95	Pesticides	1455	2269	<2000	NA
CLJ62-A3S-060-3	AOC 3, Pest, 3'	5/12/95	Pesticides	15314	25474	<2000	NA
CLJ62-A3S-063-2	AOC 3, Pest, 2'	5/12/95	Pesticides	<1000	<1000	<2000	NA

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A3S-063-3	AOC 3, Pest, 3'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-064-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-065-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-066-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-067-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	6347	<2000	NA
CLJ62-A3S-068-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	5681	<2000	NA
CLJ62-A3S-069-1	AOC 3, Pest, 1'	5/12/95	Pesticides	1100	<1000	<2000	NA
CLJ62-A3S-070-1	AOC 3, Pest, 1'	5/12/95	Pesticides	2113	>50000	<2000	NA
CLJ62-A3S-071-1	AOC 3, Pest, 1'	5/12/95	Pesticides	1160	5800	<2000	NA
CLJ62-A3S-072-1	AOC 3, Pest, 1'	5/12/95	Pesticides	>50000	34082	<2000	NA
CLJ62-A3S-073-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-074-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-075-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-076-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-077-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-078-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-079-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-080-1	AOC 3, Pest, 1'	5/12/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-081-1	AOC 3, Pest, 1'	5/15/95	Pesticides	<1000	>50000	<2000	NA
CLJ62-A3S-082-1	AOC 3, Pest, 1'	5/15/95	Pesticides	<1000	>50000	<2000	NA
CLJ62-A3S-083-1	AOC 3, Pest, 1'	5/15/95	Pesticides	<1000	>50000	<2000	NA
CLJ62-A3S-060-2	AOC 3, Pest, 2'	5/16/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-060-3	AOC 3, Pest, 3'	5/16/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-070-2	AOC 3, Pest, 2'	5/16/95	Pesticides	2926	21641	<2000	NA
CLJ62-A3S-071-2	AOC 3, Pest, 2'	5/16/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-072-2	AOC 3, Pest, 2'	5/16/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-070-3	AOC 3, Pest, 3'	5/17/95	Pesticides	2253	4567	<2000	NA
CLJ62-A3S-081-2	AOC 3, Pest, 2'	5/17/95	Pesticides	<1000	>50000	<2000	NA
CLJ62-A3S-082-2	AOC 3, Pest, 2'	5/17/95	Pesticides	24988	15230	<2000	NA
CLJ62-A3S-083-2	AOC 3, Pest, 2'	5/17/95	Pesticides	<1000	41148	<2000	NA
CLJ62-A3S-084-1	AOC 3, Pest, 1'	5/17/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-085-1	AOC 3, Pest, 1'	5/17/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-086-1	AOC 3, Pest, 1'	5/17/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-087-1	AOC 3, Pest, 1'	5/17/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-088-1	AOC 3, Pest, 1'	5/17/95	Pesticides	<1000	<1000	<2000	NA

<u>Sample Name</u>	<u>Sample Location</u>	<u>Date Sampled</u>	<u>Pest/PCBs</u>	<u>4,4'-DDT ug/Kg</u>	<u>4,4'-DDD ug/Kg</u>	<u>Chlordane ug/Kg</u>	<u>Aro-1260 mg/Kg</u>
CLJ62-A3S-089-1	AOC 3, Pest, 1'	5/17/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-081-3	AOC 3, Pest, 3'	5/19/95	Pesticides	1234	11228	<2000	NA
CLJ62-A3S-082-3	AOC 3, Pest, 3'	5/19/95	Pesticides	<1000	<1000	<2000	NA
CLJ62-A3S-083-3	AOC 3, Pest, 3'	5/19/95	Pesticides	>50000	>50000	<2000	NA
CLJ62-A3S-083-5	AOC 3, PST, 5'	5/24/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-083-4	AOC 3, PST, 4'	5/24/95	Pesticides	<8400	<12000	<2200	NA

*Clean-up Criteria*      *Soil*                      8400      12000      2200      0.37

ND = not detected  
NA = not analyzed

Table 6.1  
 PESTICIDE/PCB RESULTS JOB#16866  
 Field Screening  
 AOC 4

Sample Name	Sample Location	Date Sampled	Pest/PCBs	4,4'-DDT ug/Kg	4,4'-DDD ug/Kg	Chlordane ug/Kg	Aro-1260 mg/Kg
CLJ62-A4S-001	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	<1000	<1000	<2000	<0.3
CLJ62-A4S-002	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	2644	1685	<2000	<0.3
CLJ62-A4S-003	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1151	<1000	<2000	<0.3
CLJ62-A4S-004	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	<1000	<1000	<2000	<0.3
CLJ62-A4S-005	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	<1000	<1000	<2000	<0.3
CLJ62-A4S-006	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1153	<1000	<2000	<0.3
CLJ62-A4S-007	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	2024	<1000	<2000	<0.3
CLJ62-A4S-008	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	<1000	<1000	<2000	<0.3
CLJ62-A4S-009	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	34313	3125	<2000	<0.3
CLJ62-A4S-010	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1177	1109	<2000	<0.3
CLJ62-A4S-010D	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1540	<1000	<2000	<0.3
CLJ62-A4S-011	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	<1000	<1000	<2000	<0.3
CLJ62-A4S-012	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	2611	<1000	<2000	<0.3
CLJ62-A4S-013	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1120	<1000	<2000	<0.3
CLJ62-A4S-014	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	<1000	<1000	<2000	<0.3
CLJ62-A4S-015	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1287	<1000	<2000	<0.3
CLJ62-A4S-016	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	1937	<1000	<2000	<0.3
CLJ62-A4S-017	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	6117	<1000	<2000	<0.3
CLJ62-A4S-018	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	2077	<1000	<2000	<0.3
CLJ62-A4S-018D	AOC 4, PCB/Pest	5/3/95	PCB'S/Pest	2265	<1000	<2000	<0.3

*Clean-up Criteria*      *Soil*                      8400      12000      2200      0.37

ND = not detected

NA = not analyzed

Table 6.2  
 PESTICIDE/PCB RESULTS JOB#16866  
 Confirmation Analysis  
 AOC 1

Sample Name	Sample Location	Date Sampled	Pest/PCBs	4,4'-DDT ug/Kg	4,4'-DDD ug/Kg	Chlordane ug/Kg	Aro-1260 mg/Kg
CLJ62-S-001	AOC1, Base, PCB	11/21/95	PCB's	NA	NA	NA	<0.8
CLJ62-S-002	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	<0.8
CLJ62-S-003	AOC1, Base, PCB	11/21/95	PCB's	NA	NA	NA	4.9
CLJ62-S-004	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	5.0
CLJ62-S-005	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	2.8
CLJ62-S-006	AOC1, Base, PCB	11/21/95	PCB's	NA	NA	NA	1.3
CLJ62-S-007	AOC1, Base, PCB	11/21/95	PCB's	NA	NA	NA	3.0
CLJ62-S-008	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	1.5
CLJ62-S-009	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	4.8
CLJ62-S-010	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	1.4
CLJ62-S-010D	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	1.5
CLJ62-S-011	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	2.7
CLJ62-S-012	AOC1, Sidewall, PCB	11/21/95	PCB's	NA	NA	NA	2.0

*Clean-up Criteria*      *Soil*                      8400      12000      2200      10

ND = not detected  
 NA = not analyzed

**Table 6.2**  
**PESTICIDE/PCB RESULTS JOB#16866**  
**Confirmation Analysis**  
**AOC 2**

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A2S-002CS	AOC 2, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A2-001ZBC	AOC 2, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A2-002ZCS	AOC 2, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A2-003ZCS	AOC 2, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA

*Clean-up Criteria*      *Soil*                      8400      12000      2200      10

ND = not detected  
 NA = not analyzed

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A3-16.6CS	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-16.6CS D	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-17.6CS	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-17.6BC	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA

*Clean-up Criteria*

*Soil*

8400

12000

2200

10

ND = not detected

NA = not analyzed

**Table 6.2**  
**PESTICIDE/PCB RESULTS JOB#16866**  
**Confirmation Analysis**  
**AOC 3**

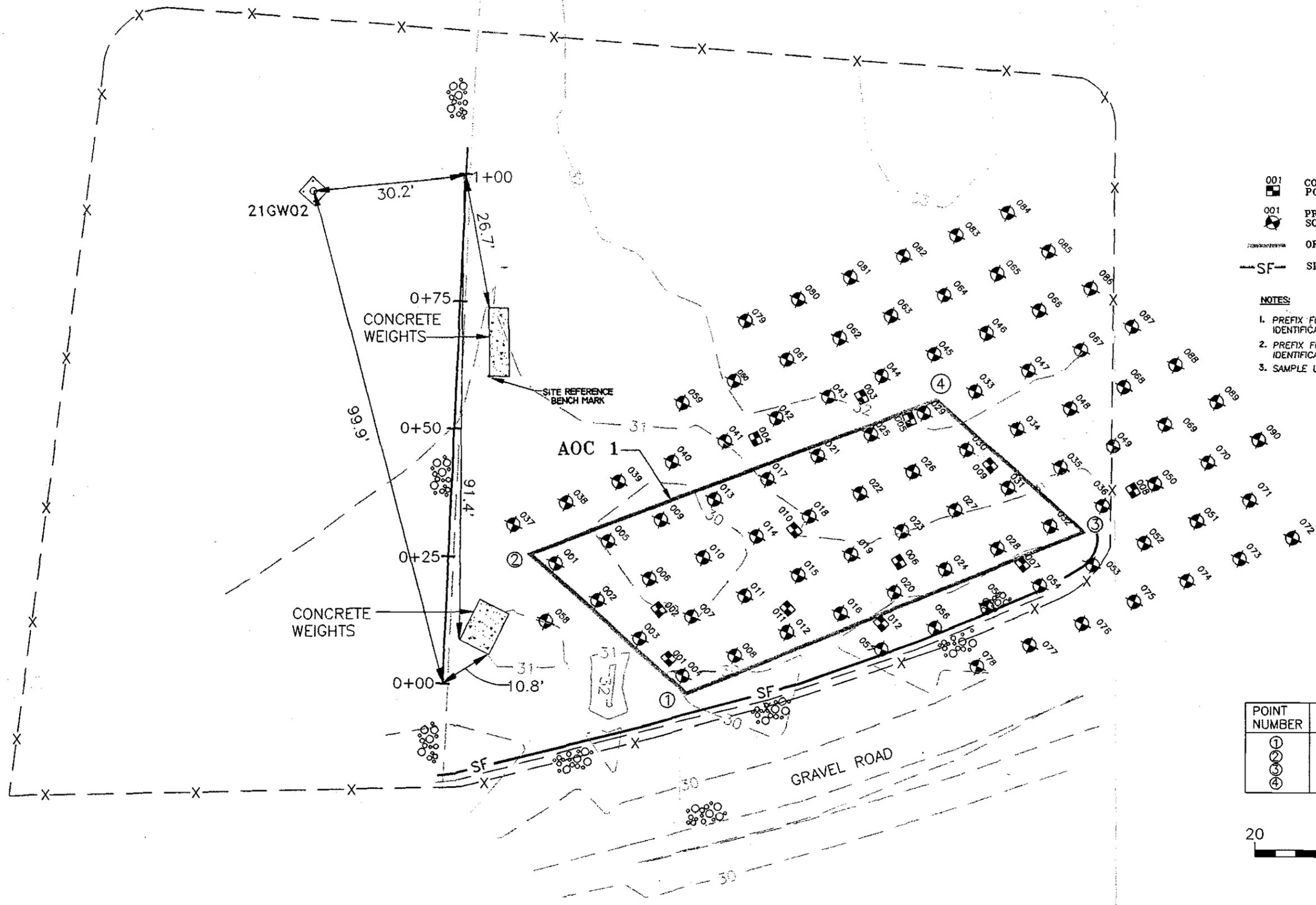
<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A3S-001-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-002-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-003-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-004-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-006-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-007-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-009-CS	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-001-BC	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-002-BC	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-004-BC	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-006-BC	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-006-BC D	AOC 3, Pest	5/30/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-011CS	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-015CS	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-014BC	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-014CS	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-015BC	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-015BCD	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-013BC	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-012CS	AOC 3, Pest	6/7/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3S-016BC	AOC 3, Pest	6/8/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-11.5BC	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-12.5BC	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-13.5CS	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-16.5CS	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-16.5CS D	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-17.5CS	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-17.5BC	AOC 3, Pest	6/12/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-11.6BC	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-12.6BC	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA
CLJ62-A3-13.6CS	AOC 3, Pest	6/15/95	Pesticides	<8400	<12000	<2200	NA

**Table 6.2**  
**PESTICIDE/PCB RESULTS JOB#16866**  
**Confirmation Analysis**  
**AOC 4**

<b>Sample Name</b>	<b>Sample Location</b>	<b>Date Sampled</b>	<b>Pest/PCBs</b>	<b>4,4'-DDT ug/Kg</b>	<b>4,4'-DDD ug/Kg</b>	<b>Chlordane ug/Kg</b>	<b>Aro-1260 mg/Kg</b>
CLJ62-A4S-001BC	AOC 4, Soil, Pest	6/7/95	Pesticides	<8400	<12000	<2200	<0.7
CLJ62-A4S-001-CS	AOC 4, Soil, Pest	6/7/95	Pesticides	<8400	<12000	<2200	<0.7
CLJ62-A4S-001-CSD	AOC 4, Soil, Pest	6/7/95	Pesticides	<8400	<12000	<2200	<0.7

*Clean-up Criteria*      *Soil*                      *8400*      *12000*      *2200*      *10*

ND = not detected  
 NA = not analyzed



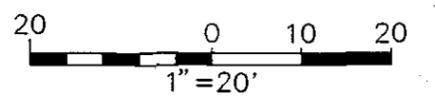
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- ORIGINAL AOC-1
- SF SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A1S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A1S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
①	0+00	48'R
②	0+26.5'	16.5'R
③	0+35'	125'R
④	0+60'	94'R



02341H052

C:\OHM\LEJUNE\AOC1\6868\FIG 6.1A.DWG

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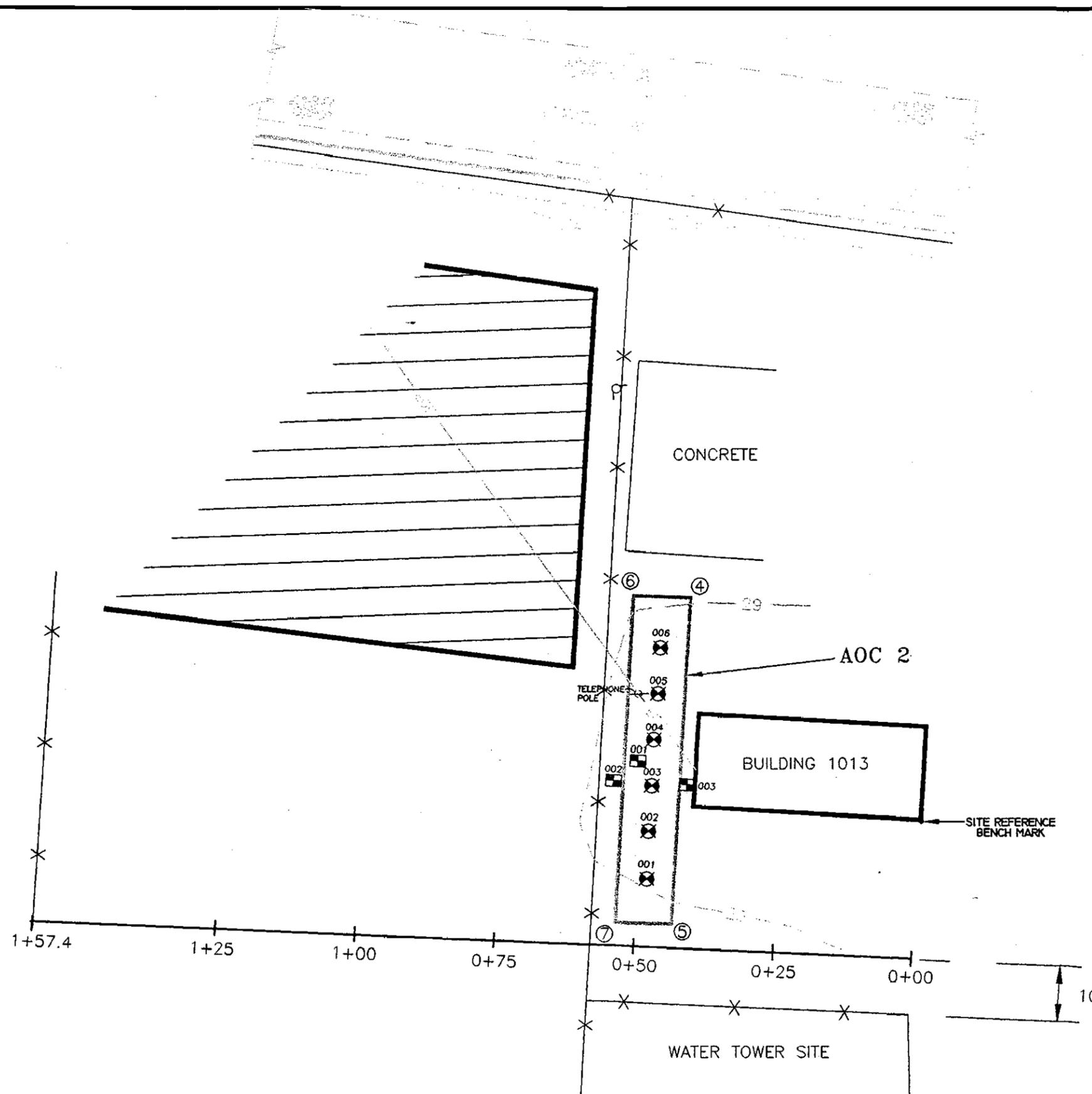
SUBMITTED: \_\_\_\_\_ PROJECT MANAGER DATE: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ SR. PROJECT ENGINEER DATE: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DEPT. MANAGER DATE: \_\_\_\_\_

AT FULL SCALE (IF NOT 2"-SCALE ACCURACIOUSLY)		REVISIONS			
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	1	ISSUE FOR REVIEW & APPROVAL	OHM	2/16/98	
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 NAVAL STATION NORFOLK, VIRGINIA  
 LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0082  
 OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJUNE, N.C.

**FIGURE 6.1**  
**SAMPLE LOCATIONS SITE 21**  
**FOR AOC-1**  
 PREPARED FOR  
 MCB CAMP LEJUNE



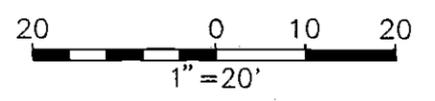
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- ORIGINAL AOC-2
- SF- SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A2S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A2S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
④	0+42.5'	62.5'R
⑤	0+43'	4'R
⑥	0+53'	62.0'R
⑦	0+53.5'	4'R



02341 H062

**FIGURE 6.2**  
**SAMPLE LOCATIONS SITE 21**  
**FOR AOC-2**  
 PREPARED FOR  
 MCB CAMP LEJEUNE

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 Norcross, Georgia  
 A Subsidiary of OHM Corporation

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 PROJECT MANAGER  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SR. PROJECT ENGINEER  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DEPT. MANAGER

DESIGNED: \_\_\_\_\_  
 CHECKED: G. GILLES  
 CHECKED: J. DUNN

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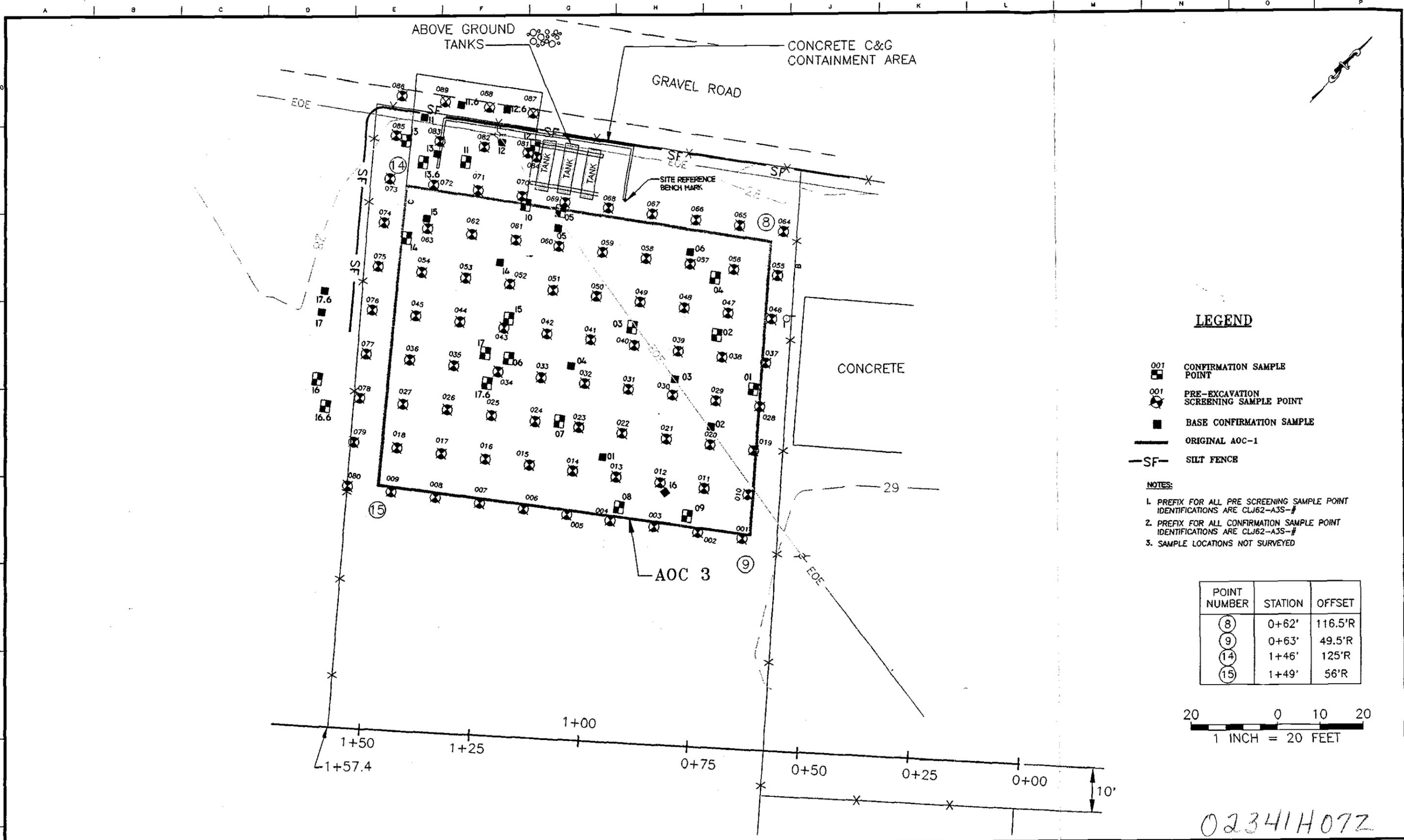
**ATLANTIC DIVISION**

NAVAL STATION NORFOLK, VIRGINIA

LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062

OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.

C:\OHM\LEJEUNE\AOC1\6866\FIG6-2A.DWG



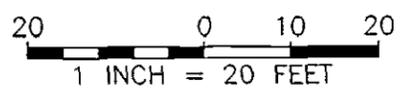
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- BASE CONFIRMATION SAMPLE
- ORIGINAL AOC-1
- SF- SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A3S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A3S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
8	0+62'	116.5'R
9	0+63'	49.5'R
14	1+46'	125'R
15	1+49'	56'R



02341H07Z

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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

REVISIONS		BY	DATE	APP.
ZONE	REV.			
	1	OHM	3/1/95	
	2	OHM	2/21/98	

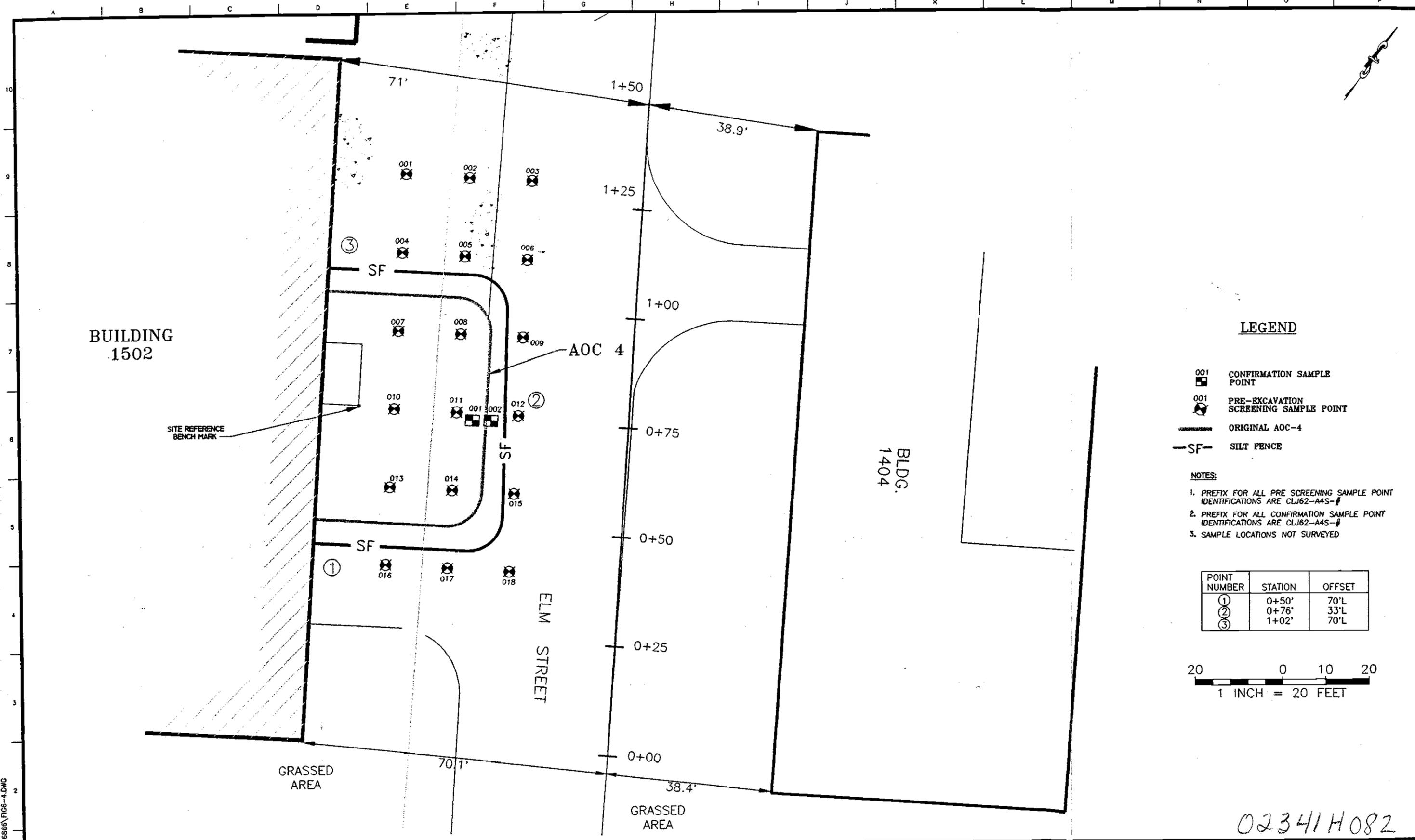
DESIGNED: \_\_\_\_\_  
CHECKED: G. GILLES  
CHECKED: J. DUNN

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OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.

**FIGURE 6.3**  
**SAMPLING LOCATIONS SITE 21 FOR AOC-3**  
PREPARED FOR  
MCB CAMP LEJEUNE

D:\OHM\LEJEUNE\AOC\18866\FIG6-3.DWG



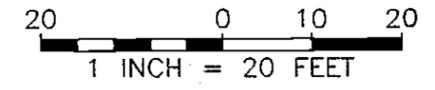
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- ORIGINAL AOC-4
- SF- SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A4S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A4S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
①	0+50'	70'L
②	0+76'	33'L
③	1+02'	70'L



02341H082

**FIGURE 6.4**  
**SAMPLE LOCATIONS SITE 78**  
**FOR AOC-4**  
 PREPARED FOR  
 MCB CAMP LEJEUNE

**OHM Remediation Services Corp.**  
 Norcross, Georgia  
 A Subsidiary of OHM Corporation

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 PROJECT MANAGER

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SR. PROJECT ENGINEER

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DEPT. MANAGER

DESIGNED: \_\_\_\_\_  
 CHECKED: G. GILLES  
 CHECKED: J. DUNN

REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.
	1	ISSUE FOR REVIEW & APPROVAL	OHM	3/1/95	
	2	AS BUILT	OHM	2/28/96	

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 LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062  
 OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.

C:\OHM\LEJEUNE\AOC\16866\FIG6-4.DWG

## **7.0 OFF-SITE DISPOSITION OF MATERIAL**

All waste material that was excavated at the site and destined for off site disposal facilities were transported by a licensed waste hauler. Robbie D. Woods Inc. transported 29 truck loads containing approximately 649.76 tons of pesticide contaminated soil to LWD, Inc. in Calvert City, Kentucky. The PCB contaminated soil was transported to two different disposal facilities. Five truckloads containing approximately 91.90 tons of soil were transported by Robbie D. Woods Inc. to Chemical Waste Management, Inc. in Port Arthur, Texas. Three additional truckloads containing approximately 68.94 tons of soil were transported by Hilco Transport, Inc. to BFI, Inc.'s land disposal facility in Sampson County, North Carolina. A total of approximately 160.84 tons of PCB contaminated soil was disposed off site. All transportation and disposal was performed in accordance with state and federal regulations.

All trucks were weighed by the Base scales to establish their tare weight prior to being loaded. After loading, the trucks were re-weighed to ensure maximum load capacities within their legal haul weights. The trucks were brushed to remove soil and debris from the vehicles tires and bed, the manifests were signed by Base personnel, and the trucks released for travel to the disposal facility. The following table summarizes the load-out dates, weights and incineration date of the waste where applicable. Copies of the waste manifests are included in this report as Appendix C and disposal certification is found in Appendix D.



Table 7.1 - Summary of Off-Site Waste Disposal

Manifest Number	Description	Quantity (Tons)	Destination	Disposal Method	Hazard. Classification
I 1078	PCB Contaminated Soil	17.91	CWM/Port Arthur, TX	Incineration	UN 3077
I 1079	PCB Contaminated Soil	18.05	CWM/Port Arthur, TX	Incineration	UN 3077
I 1080	PCB Contaminated Soil	19.08	CWM/Port Arthur, TX	Incineration	UN 3077
I 1081	PCB Contaminated Soil	19.28	CWM/Port Arthur, TX	Incineration	UN 3077
I 1082	PCB Contaminated Soil	17.58	CWM/Port Arthur, TX	Incineration	UN 3077
I 1086	Pesticide Contaminated Soil	23.89	LWD/Calvert City, KY	Incineration	NA 3077
I 1087	Pesticide Contaminated Soil	22.86	LWD/Calvert City, KY	Incineration	NA 3077
I 1088	Pesticide Contaminated Soil	22.41	LWD/Calvert City, KY	Incineration	NA 3077
I 1089	Pesticide Contaminated Soil	22.05	LWD/Calvert City, KY	Incineration	NA 3077
O 1090	Pesticide Contaminated Soil	22.50	LWD/Calvert City, KY	Incineration	NA 3077
O 1091	Pesticide Contaminated Soil	21.12	LWD/Calvert City, KY	Incineration	NA 3077
O 1092	Pesticide Contaminated Soil	23.78	LWD/Calvert City, KY	Incineration	NA 3077
O 1093	Pesticide Contaminated Soil	22.97	LWD/Calvert City, KY	Incineration	NA 3077
O 1094	Pesticide Contaminated Soil	23.15	LWD/Calvert City, KY	Incineration	NA 3077
O 1097	Pesticide Contaminated Soil	21.88	LWD/Calvert City, KY	Incineration	NA 3077
O 1099	Pesticide Contaminated Soil	22.83	LWD/Calvert City, KY	Incineration	NA 3077



Table 7.1 - Summary of Off-Site Waste Disposal

Manifest Number	Description	Quantity (Tons)	Destination	Disposal Method	Hazard. Classification
0 1100	Pesticide Contaminated Soil	23.94	LWD/ Calvert City, KY	Incineration	NA 3077
0 1101	Pesticide Contaminated Soil	22.70	LWD/Calvert City, KY	Incineration	NA 3077
0 1102	Pesticide Contaminated Soil	23.75	LWD/Calvert City, KY	Incineration	NA 3077
0 1105	Pesticide Contaminated Soil	22.98	LWD/Calvert City, KY	Incineration	NA 3077
0 1106	Pesticide Contaminated Soil	23.29	LWD/Calvert City, KY	Incineration	NA 3077
0 1107	Pesticide Contaminated Soil	24.32	LWD/ Calvert City, KY	Incineration	NA 3077
0 1108	Pesticide Contaminated Soil	23.16	LWD/Calvert City, KY	Incineration	NA 3077
0 1109	Pesticide Contaminated Soil	23.15	LWD/Calvert City, KY	Incineration	NA 3077
0 1114	Pesticide Contaminated Soil	24.00	LWD/Calvert City, KY	Incineration	NA 3077
0 1115	Pesticide Contaminated Soil	23.38	LWD/Calvert City, KY	Incineration	NA 3077
0 1116	Pesticide Contaminated Soil	22.57	LWD/Calvert City, KY	Incineration	NA 3077
0 1117	Pesticide Contaminated Soil	23.83	LWD/Calvert City, KY	Incineration	NA 3077
0 1118	Pesticide Contaminated Soil	24.02	LWD/Calvert City, KY	Incineration	NA 3077
0 1122	Pesticide Contaminated Soil	21.95	LWD/Calvert City, KY	Incineration	NA 3077
0 1125	Pesticide Contaminated Soil	23.22	LWD/Calvert City, KY	Incineration	NA 3077
0 1126	Pesticide Contaminated Soil	24.56	LWD/Calvert City, KY	Incineration	NA 3077



Table 7.1 - Summary of Off-Site Waste Disposal

Manifest Number	Description	Quantity (Tons)	Destination	Disposal Method	Hazard. Classification
0 1127	Pesticide Contaminated Soil	24.87	LWD/Calvert City, KY	Incineration	NA 3077
0 1155	Pesticide Contaminated Soil	0.625 (4 drums)	LWD/Calvert City, KY	Incineration	NA 3077
883344	PCB Contaminated Soil	25.10	BFI/Sampson County, NC	Landfill	Non-Haz
883346	PCB Contaminated Soil	18.18	BFI/Sampson County, NC	Landfill	Non-Haz
883347	PCB/Contaminated Soil	25.66	BFI/Sampson County, NC	Landfill	Non-Haz

## **8.0 QUALITY CONTROL SUMMARY**

---

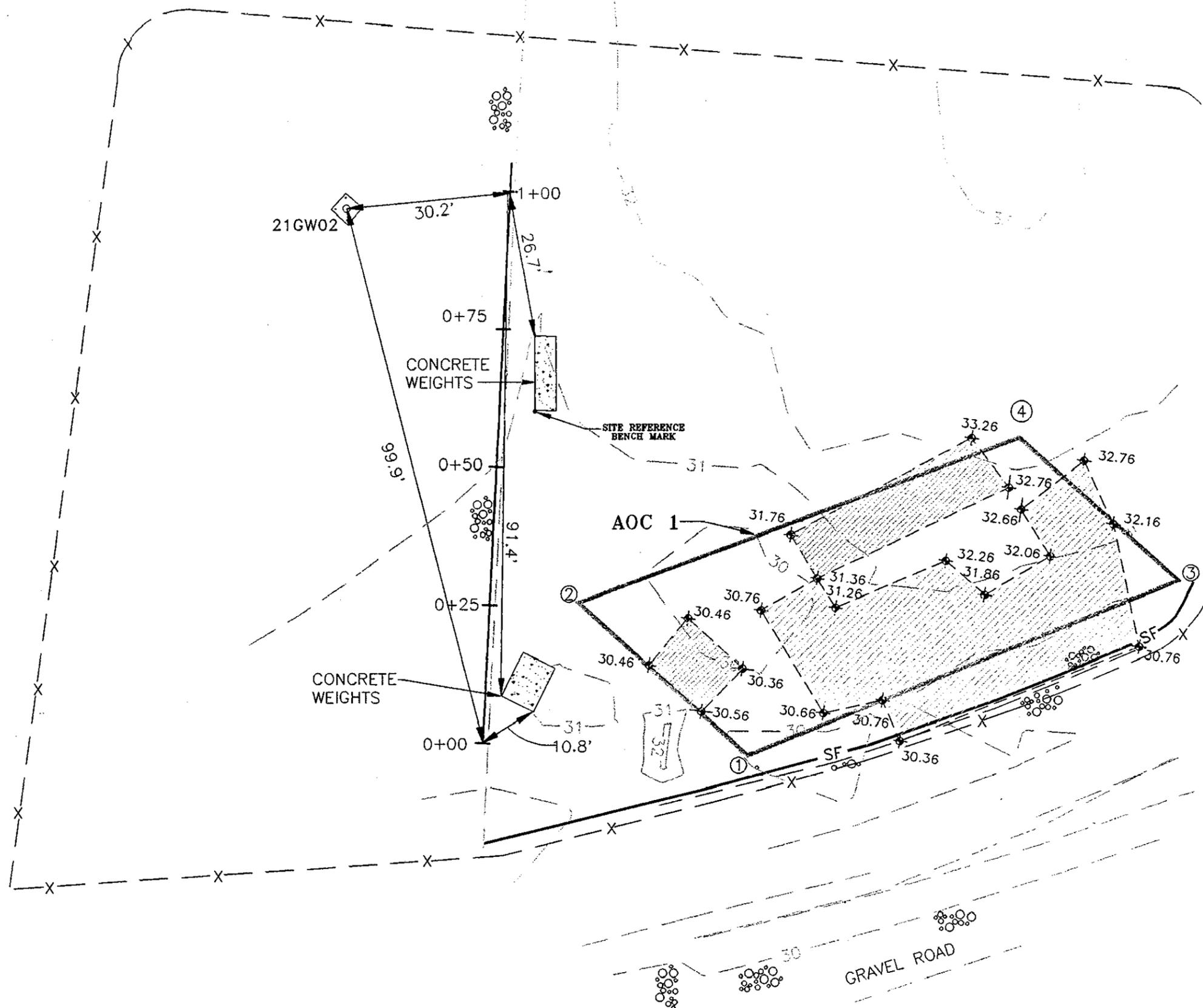
The Quality Control (QC) Engineer conducted preparatory and initial site inspections during a site visit. This offered the QC Engineer an opportunity to review the completeness and adequacy of mobilization activities, to observe health and safety practices, to evaluate excavation operations, and to check sampling and analysis documentation. Follow-up inspections were completed after any modifications were approved.

Inspections were performed in accordance with the requirements of the contract (Section 6.11) as supplemented by the Delivery Order Contractor Quality Control Plan. Inspection results were documented and submitted on Contractor QC Report Forms. A weekly QC meeting was conducted and the minutes recorded and submitted with the inspection report to the ROICC by the Site Supervisor. All QC documentation is located in Appendix H.

Additional submittals forwarded to the ROICC and their frequency of submission were as follows:

Daily:	Sign-in Log Health and Safety Report Daily Cost Report
Monthly:	Progress Report
As Generated:	Field Sampling Test Results Confirmation Sample Test Results

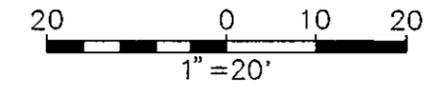
Appendix A  
As-Built Drawings



**LEGEND**

- 33.26 \* FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- ORIGINAL AOC-1
- SF- SILT FENCE
- - - ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
①	0+00	48'R
②	0+26.5'	16.5'R
③	0+35'	125'R
④	0+60'	94'R



02341H092

C:\OHM\LEJUNE\AOC1\6866\FIG 2.1.DWG

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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

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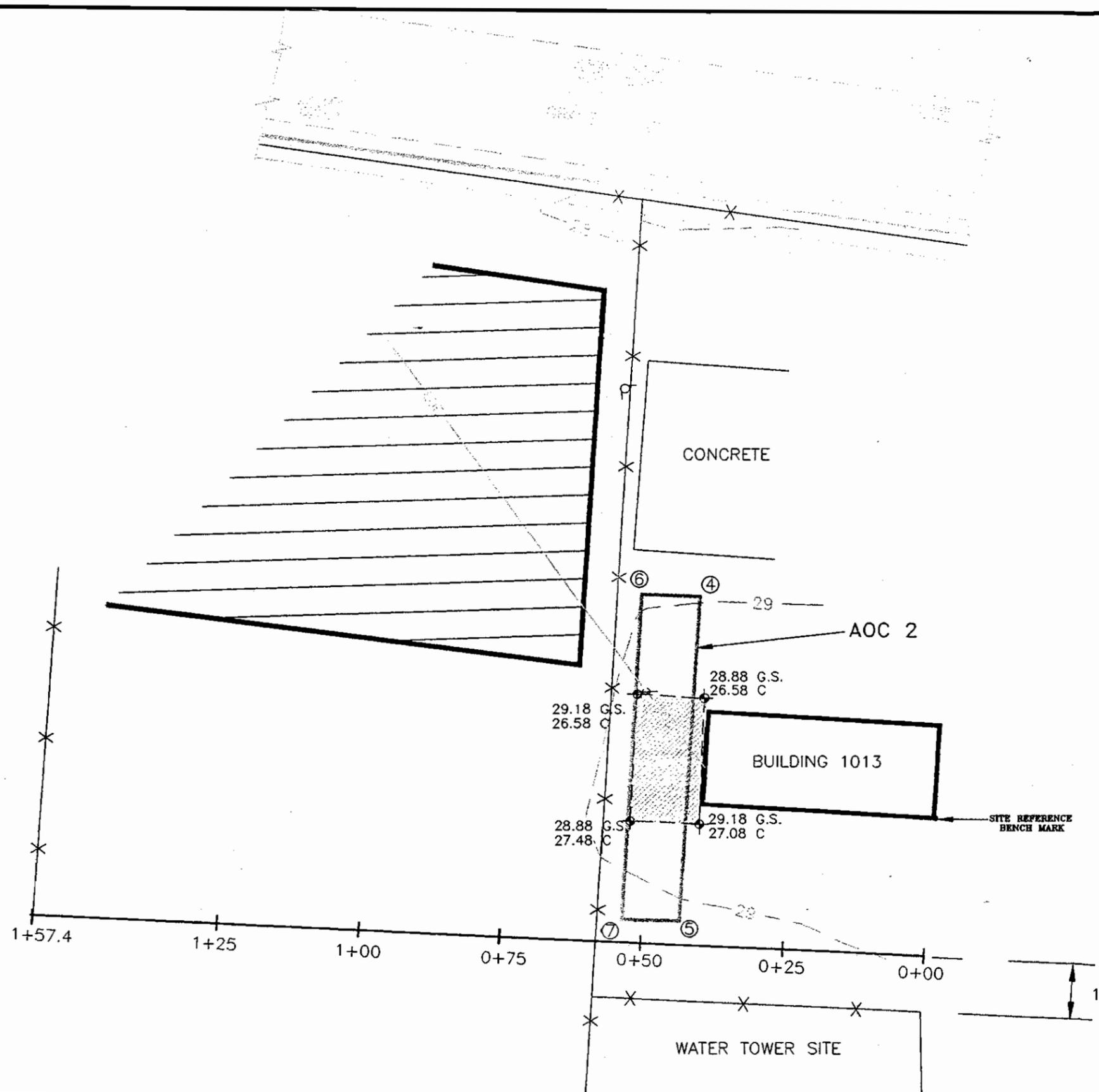
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NAVAL STATION NORFOLK, VIRGINIA

LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062  
OPERABLE UNIT NO. 1 MARINE CORPS BASE, CAMP LEJUNE, N.C.

**FIGURE 2.1**  
**TOPOGRAPHIC SURVEY SITE 21**  
**FOR AOC-1**

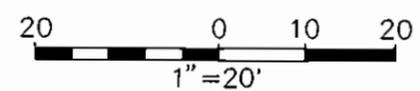
PREPARED FOR  
MCB CAMP LEJUNE



**LEGEND**

- 28.88 G.S.  
27.48 C + FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- [Solid Line] ORIGINAL AOC-1
- [Line with 'SF'] SILT FENCE
- [Dashed Line] ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
④	0+42.5'	62.5'R
⑤	0+43'	4'R
⑥	0+53'	62.0'R
⑦	0+53.5'	4'R



02341 H102

C:\OHM\LEJEUNE\AOC\16866\Fig2-3A.DWG

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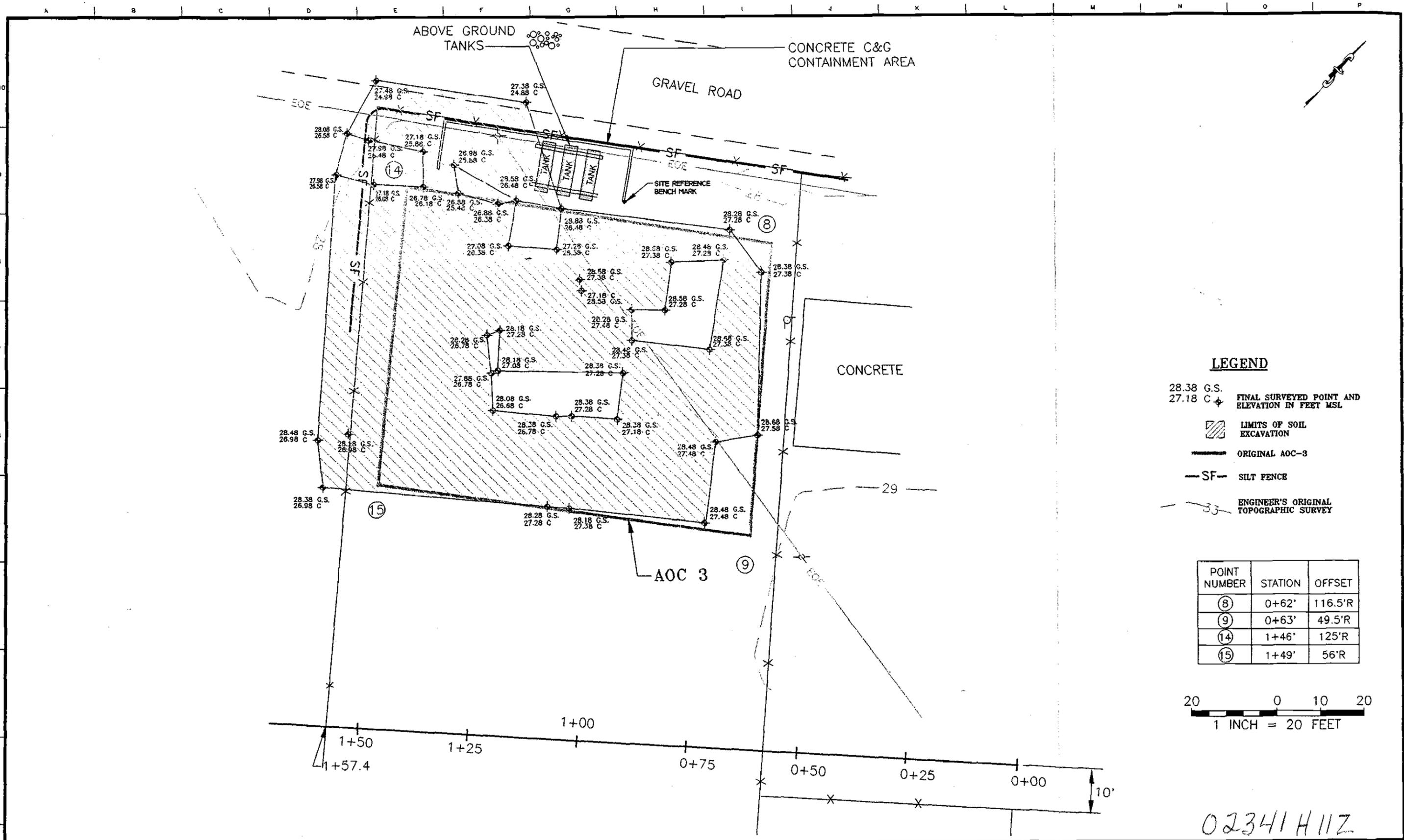
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 APPROVED: \_\_\_\_\_ SR PROJECT ENGINEER DATE: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DEPT. MANAGER DATE: \_\_\_\_\_

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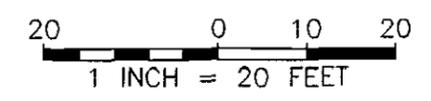
**FIGURE 2.2**  
**TOPOGRAPHIC SURVEY SITE 21**  
**FOR AOC-2**  
 PREPARED FOR  
 MCB CAMP LEJEUNE



**LEGEND**

- 28.38 G.S. ◆ FINAL SURVEYED POINT AND ELEVATION IN FEET MSL
- 27.18 C ◆
- [Hatched Box] LIMITS OF SOIL EXCAVATION
- [Solid Line] ORIGINAL AOC-3
- [Dashed Line] SF- SILT FENCE
- [Dotted Line] ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

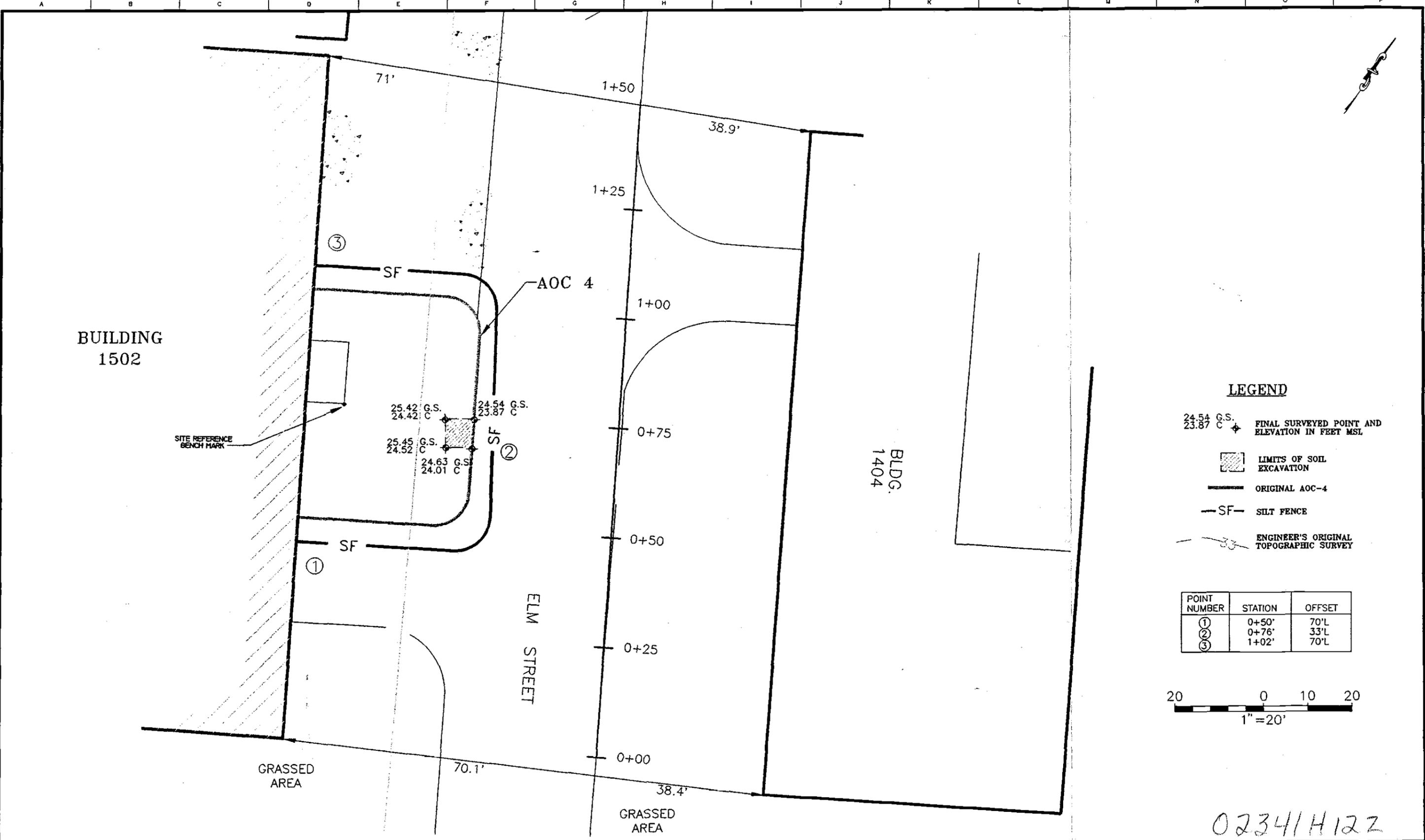
POINT NUMBER	STATION	OFFSET
8	0+62'	116.5'R
9	0+63'	49.5'R
14	1+46'	125'R
15	1+49'	56'R



02341H11Z

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	SUBMITTED: _____ DATE: _____ PROJECT MANAGER: _____ APPROVED: _____ DATE: _____ SR. PROJECT ENGINEER: _____ APPROVED: _____ DATE: _____ DEPT. MANAGER: _____	CADD FILE: FIG2-2.DWG DRAWN: J. COLLINS DESIGNED: _____ CHECKED: G. GILLES CHECKED: J. DUNN	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ZONE</th> <th>REV.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>APP.</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>ISSUE FOR REVIEW &amp; APPROVAL</td> <td>OHM</td> <td>3/1/95</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>AS BUILT</td> <td>OHM</td> <td>2/21/96</td> <td></td> </tr> </tbody> </table>	ZONE	REV.	DESCRIPTION	BY	DATE	APP.		1	ISSUE FOR REVIEW & APPROVAL	OHM	3/1/95			2	AS BUILT	OHM	2/21/96		THE INFORMATION OR DATA CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY AND THE PROPERTY OF OHM REMEDIATION SERVICE CORP. (OHM), AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY PRIOR WRITTEN CONSENT OF OHM. COPYRIGHT © OHM REMEDIATION SERVICES CORP., 1994.	NAVAL STATION LANTDIV RAC CONTRACT N62470-93-D-3032 OPERABLE UNIT NO. 1
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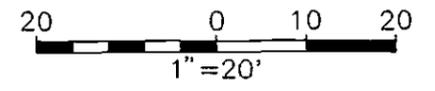
D:\OHM\LEJEUNE\AOC1\16866\FIG2-2.DWG



**LEGEND**

- 24.54 G.S.  
23.87 C.S.
- LIMITS OF SOIL EXCAVATION
- ORIGINAL AOC-4
- SF- SILT FENCE
- ENGINEER'S ORIGINAL TOPOGRAPHIC SURVEY

POINT NUMBER	STATION	OFFSET
①	0+50'	70'L
②	0+76'	33'L
③	1+02'	70'L



02341H122

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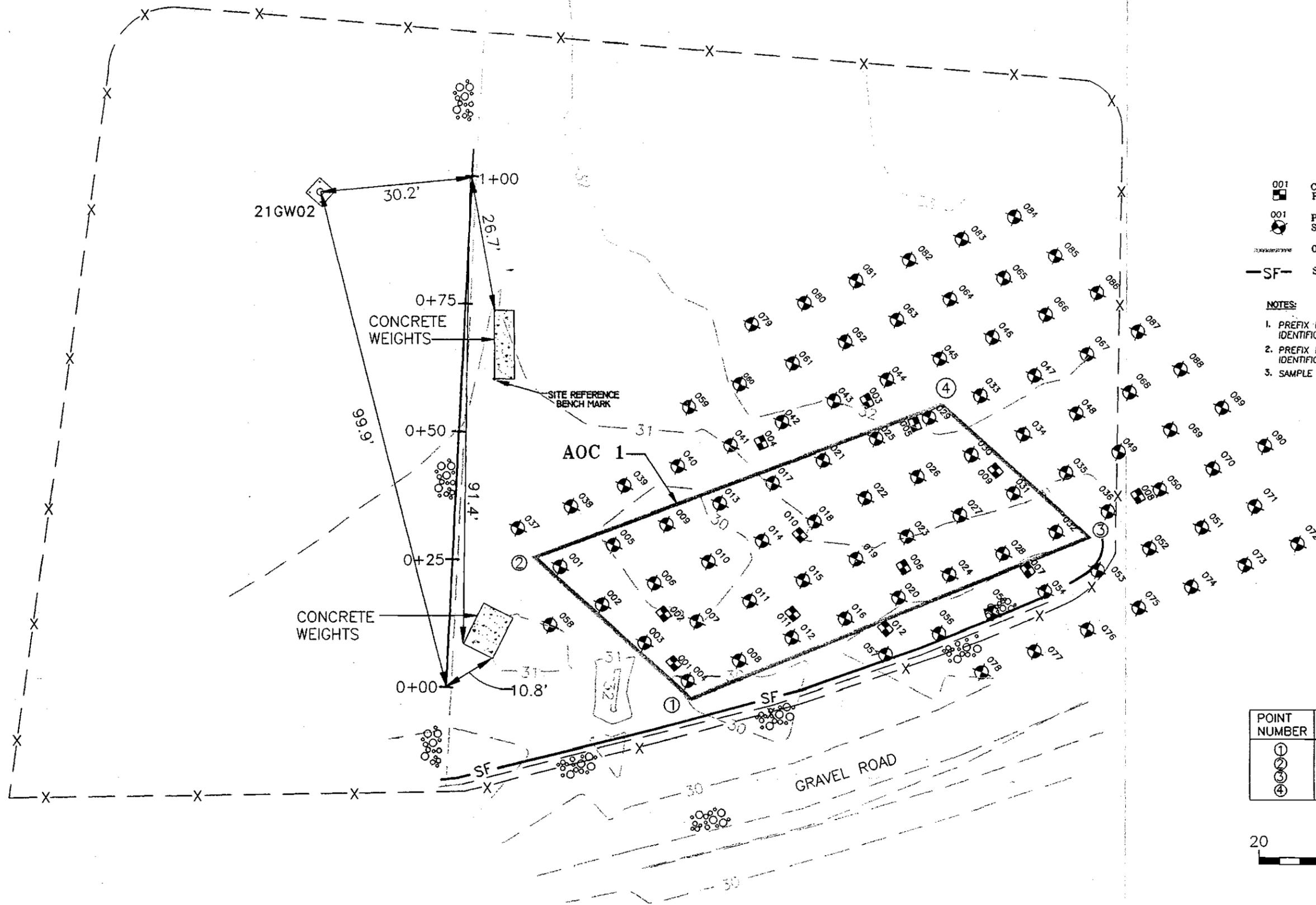
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**FIGURE 2.4**  
**TOPOGRAPHIC SURVEY SITE 78**  
**FOR AOC-4**  
 PREPARED FOR  
 MCB CAMP LEJEUNE

D:\OHM\LEJEUNE\AOC\16866\FIG2-4.DWG



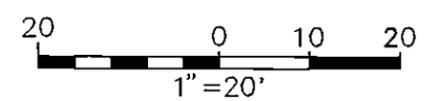
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- ORIGINAL AOC-1
- SF- SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A1S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A1S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
①	0+00	48'R
②	0+26.5'	16.5'R
③	0+35'	125'R
④	0+60'	94'R



02341 H 132

C:\OHM\LEJEUNE\AOC1\6866\FIG 6.1A.DWG

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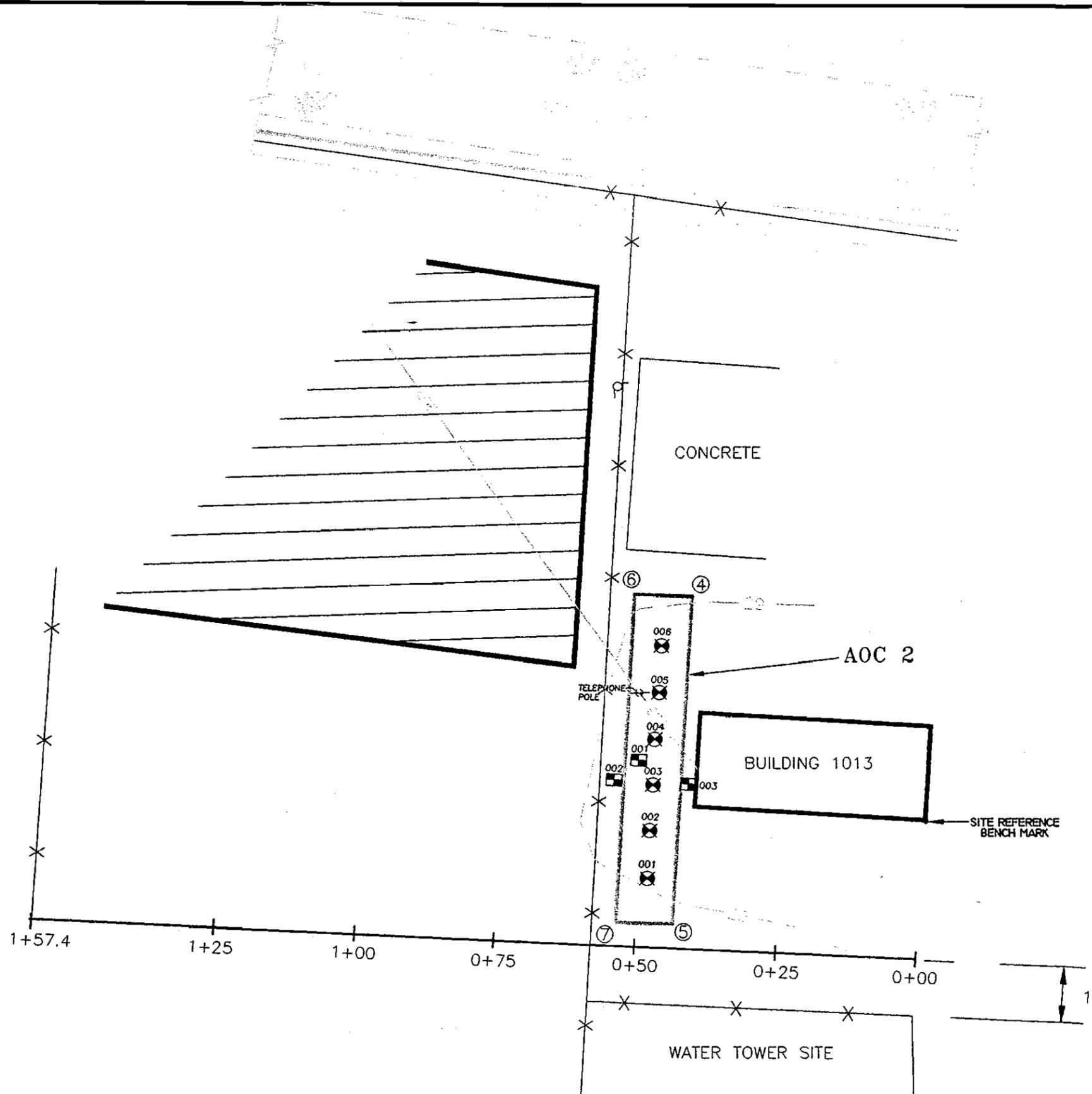
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 APPROVED: \_\_\_\_\_ SR. PROJECT ENGINEER DATE: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DEPT. MANAGER DATE: \_\_\_\_\_

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**FIGURE 6.1**  
**SAMPLE LOCATIONS SITE 21 FOR AOC-1**  
 PREPARED FOR  
 MCB CAMP LEJEUNE



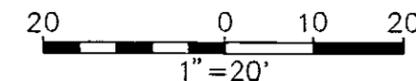
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- ORIGINAL AOC-2
- SF— SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A2S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A2S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
④	0+42.5'	62.5'R
⑤	0+43'	4'R
⑥	0+53'	62.0'R
⑦	0+53.5'	4'R



02341H14Z

**FIGURE 6.2**  
**SAMPLE LOCATIONS SITE 21**  
**FOR AOC-2**  
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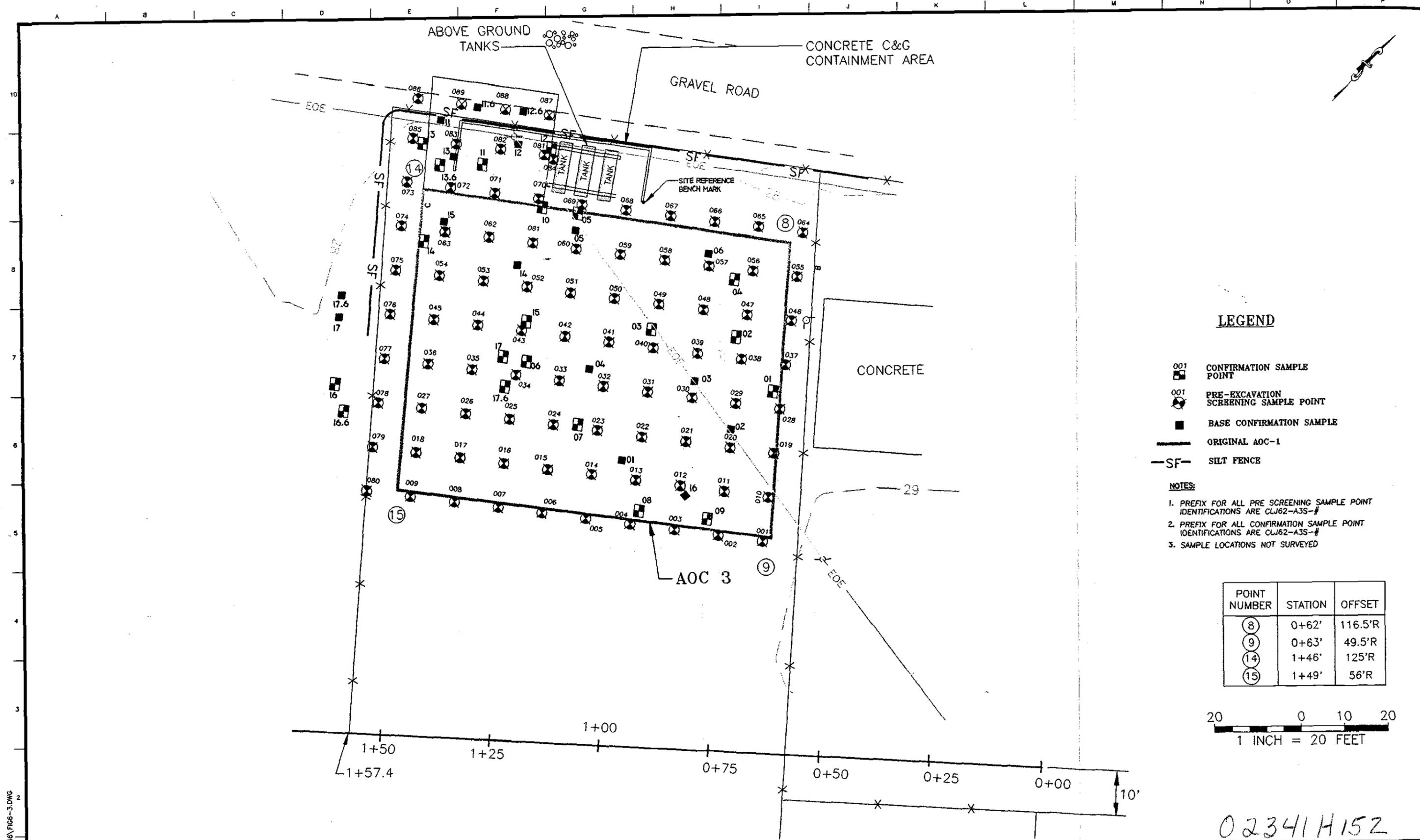
**ATLANTIC DIVISION**

NAVAL STATION NORFOLK, VIRGINIA

LANTDIV RAC CONTRACT N62470-93-D-3032 DELIVERY ORDER NO. 0062

OPERABLE UNIT No. 1 MARINE CORPS BASE, CAMP LEJEUNE, N.C.

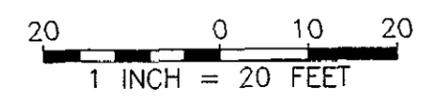
C:\OHM\LEJEUNE\AOC\16866\FIG-6-2A.DWG



- LEGEND**
- 001 CONFIRMATION SAMPLE POINT
  - 001 PRE-EXCAVATION SCREENING SAMPLE POINT
  - BASE CONFIRMATION SAMPLE
  - ORIGINAL AOC-1
  - SF SILT FENCE

- NOTES:**
1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A3S-#
  2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A3S-#
  3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
8	0+62'	116.5'R
9	0+63'	49.5'R
14	1+46'	125'R
15	1+49'	56'R



02341H152

D:\OHM\LEJUNE\AOC\16866\FIG6-3.DWG

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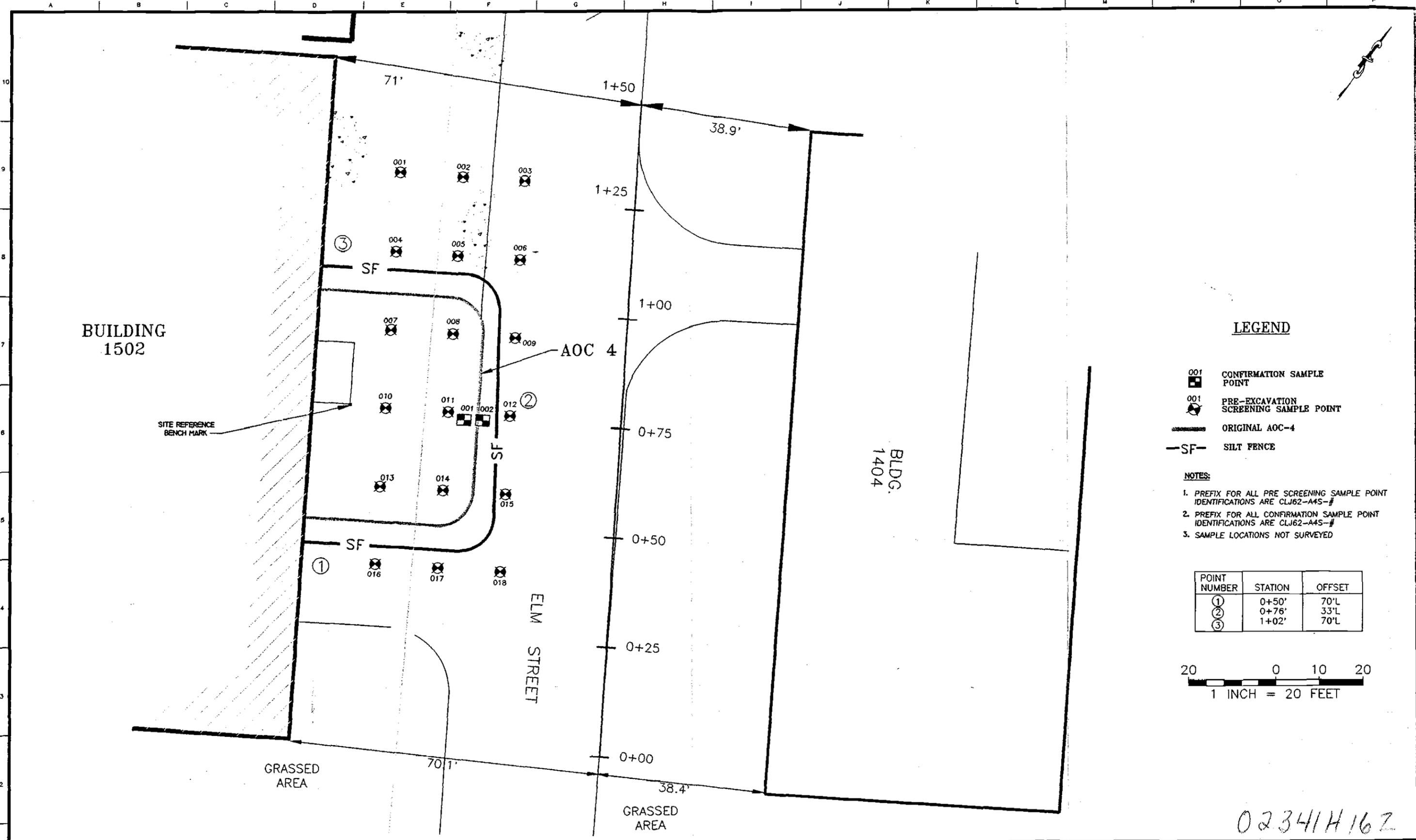
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**FIGURE 6.3**  
**SAMPLING LOCATIONS SITE 21**  
**FOR AOC-3**  
PREPARED FOR  
MCB CAMP LEJUNE



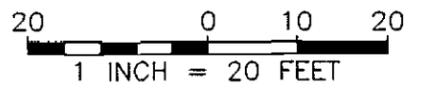
**LEGEND**

- 001 CONFIRMATION SAMPLE POINT
- 001 PRE-EXCAVATION SCREENING SAMPLE POINT
- ORIGINAL AOC-4
- SF- SILT FENCE

**NOTES:**

1. PREFIX FOR ALL PRE SCREENING SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A4S-#
2. PREFIX FOR ALL CONFIRMATION SAMPLE POINT IDENTIFICATIONS ARE CLJ62-A4S-#
3. SAMPLE LOCATIONS NOT SURVEYED

POINT NUMBER	STATION	OFFSET
①	0+50'	70'L
②	0+76'	33'L
③	1+02'	70'L



02341H16Z

C:\OHM\LEJEUNE\16865\FIG6-4.DWG

<p><b>OHM Remediation Services Corp.</b> Norcross, Georgia A Subsidiary of OHM Corporation</p>	<p><b>REVISIONS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ZONE</th> <th>REV.</th> <th>DESCRIPTION</th> <th>BY</th> <th>DATE</th> <th>APP.</th> </tr> </thead> <tbody> <tr> <td></td> <td>1</td> <td>ISSUE FOR REVIEW &amp; APPROVAL</td> <td>OHM</td> <td>3/1/95</td> <td></td> </tr> <tr> <td></td> <td>2</td> <td>AS BUILT</td> <td>OHM</td> <td>2/26/96</td> <td></td> </tr> </tbody> </table>	ZONE	REV.	DESCRIPTION	BY	DATE	APP.		1	ISSUE FOR REVIEW & APPROVAL	OHM	3/1/95			2	AS BUILT	OHM	2/26/96		<p>THE INFORMATION OR DATA CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY AND THE PROPERTY OF OHM REMEDIATION SERVICE CORP. (OHM), AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY PRIOR WRITTEN CONSENT OF OHM, COPYRIGHT © OHM REMEDIATION SERVICES CORP., 1994.</p>	<p>DEPARTMENT OF THE NAVY <b>ATLANTIC DIVISION</b> NAVAL FACILITIES ENGINEERING COMMAND NAVAL STATION NORFOLK, VIRGINIA</p>	<p><b>FIGURE 6.4</b> <b>SAMPLE LOCATIONS SITE 78</b> <b>FOR AOC-4</b> PREPARED FOR MCB CAMP LEJEUNE</p>
	ZONE	REV.	DESCRIPTION	BY	DATE	APP.																
	1	ISSUE FOR REVIEW & APPROVAL	OHM	3/1/95																		
	2	AS BUILT	OHM	2/26/96																		
<p>SUBMITTED: _____ DATE: _____ APPROVED: _____ DATE: _____ APPROVED: _____ DATE: _____</p>	<p>DESIGNED: _____ CHECKED: G. GILLES CHECKED: J. DUNN</p>	<p>LANTDIV RAC CONTRACT N62470-93-D-3032 OPERABLE UNIT NO. 1</p>	<p>DELIVERY ORDER NO. 0062 MARINE CORPS BASE, CAMP LEJEUNE, N.C.</p>																			

**Appendix B**  
**Photographic Documentation**



**Project No. 16866    Date: 23 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#1**  
**Description: excavating contaminated soil  
for off site disposal**



**Project No. 16866    Date: 02 JUNE 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC #2**  
**Description: preliminary photo**



**Project No. 16866 Date: 06 JUNE 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#3**  
**Description: sample locations**



**Project No. 16866 Date: 06 JUNE 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#3**  
**Description: sample locations**



**Project No. 16866    Date: 25 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#3**  
**Description: excavating contaminated soil**  
**for off site disposal**



**Project No. 16866    Date: 25 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#3**  
**Description: excavating contaminated soil**  
**for off site disposal**



**Project No. 16866    Date: 25 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#3**  
**Description: excavating contaminated soil**  
**for off site disposal**



**Project No. 16866    Date: 31 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#3**  
**Description: excavating contaminated soil**  
**for off site disposal**



**Project No. 16866 Date: 15 JUNE 95**

**Contract No. N62470-93-D-3032**

**Delivery Order: 62**

**Location : AOC#3**

**Description: excavating contaminated soil  
for off site disposal**



**Project No. 16866 Date: 31 MAY 95**

**Contract No. N62470-93-D-3032**

**Delivery Order: 62**

**Location : AOC#4**

**Description: preliminary photo**



**Project No. 16866    Date: 31 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#4**  
**Description: preliminary photo**



**Project No. 16866    Date: 03 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#4**  
**Description: soil sampling**



**Project No. 16866    Date: 03 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#4**  
**Description: soil sampling**



**Project No. 16866    Date: 31 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#4**  
**Description: excavating contaminated soils  
for off site disposal**



**Project No. 16866 Date: 31 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC #4**  
**Description: excavating contaminated soil**  
**for off site disposal**



**Project No. 16866 Date: 31 MAY 95**  
**Contract No. N62470-93-D-3032**  
**Delivery Order: 62**  
**Location : AOC#4**  
**Description: excavating contaminated soil**  
**for off site disposal**

**Appendix C**  
**Waste Manifests**

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION  
P. Box 13087  
Austin, Texas 78711-3087



Please print or type. (Form designed for use on site (TZ-0021) typewriter.)

Form approved OMB No. 2050-0039 expires 06/30/96

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. NC 617002258	Manifest Document No. 07	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DRMO-CAMP LEJEUNE US MARINE CORPS BASE CAMP LEJEUNE NC 28547 4. Generator's Phone (919) 451-5063				A. State Manifest Document Number 00799072		
5. Transporter 1 Company Name ROBBIE D. WOOD, INC.				6. US EPA ID Number ALD06713889	B. State Generator's ID 99937	
7. Transporter 2 Company Name				8. US EPA ID Number	C. State Transporter's ID 48762	
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. HWY. 73, 3 1/2 MILES W. OF TAYLORS BAYOU PORT ARTHUR TX 77640				10. US EPA ID Number TXD00083889	D. Transporter's Phone (281) 744-8440	
11A. HM				11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type 0 0 1 C
a. <del>28</del> ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SOIL WITH <50 PPM PCBs), UN3077, 9, PG. III				13. Total Quantity 358.20		14. Unit WT/Vol P
b.				15. Waste No. OUTS3941		
c.						
d.						
15. Special Handling Instructions and Additional Information EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE EMERGENCY RESPONSE GUIDE #31				K. Handling Codes for Wastes Listed Above		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this certification are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Eugene H. Jones		Signature <i>Eugene H. Jones</i>		Month Day Year 0 5 12 3 19 9 5		
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Steve Bingham		Signature <i>Steve Bingham</i>		Date 0 5 12 3 19 9 5		
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Date		
19. Discrepancy Indication Space						
20. Facility (Owner or Operator) Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.						
Printed/Typed Name		Signature		Date Month Day Year		

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



P.O. Box 13087, Texas 78711-3087

Print or type. (Form designed for use on size (12-inch) typewriter.)

Form approved. OMB No. 2050-0039. expires 08/31/96

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. 9104511809	Manifest Document No. 1079	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DRMO-CAMP LEJEUNE US MARINE CORPS BASE CAMP LEJEUNE NC 28547 4. Generator's Phone (919) 451-5063				A. State Manifest Document Number 00799071		
5. Transporter 1 Company Name ROBBIE D. WOOD, INC.		a. US EPA ID Number ALD06713889		B. State Generator's ID		
7. Transporter 2 Company Name		a. US EPA ID Number		C. State Transporter's ID		
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. HWY. 73, 3 1/2 MILES W. OF TAYLORS BAYOU PORT ARTHUR TX 77648				10. US EPA ID Number TXD00083889		
11A. HM	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
	a. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SOIL WITH <50 PPM PCBS), UN3077, 9, PG. III	00	36100	P	OUTS3941	
	b.					
	c.					
	d.					
J. Additional Descriptions for Materials Listed Above SERVICE REQUEST NO. 770763 DATE 5/29/95				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE EMERGENCY RESPONSE GUIDE #31						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Eugene H Jones		Signature <i>Eugene H Jones</i>		Month Day Year 05 23 95		
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name Shirley Whitsett		Signature <i>Shirley Whitsett</i>		Month Day Year 05 24 95		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Month Day Year		
19. Discrepancy Indication Space						
Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Date Month Day Year		

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



AL Texas 78711-3087

Form approved. OMB No. 2050-0029, expires 01/01/95

Print or type. (Form designed for use on elite (12-pitch) typewriter.)

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. NC 617072258	Manifest Document No. 1087	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DRMO-CAMP LEJEUNE US MARINE CORPS BASE CAMP LEJEUNE NC 28547			COMMANDING GENERAL AC/G ENVIRONMENTAL MGMT. DEPT. ATTN: JOHN RIGGS		A. State Manifest Document Number 00799070	
4. Generator's Phone ( 919) 451-5063			B. State Generator's ID		C. State Generator's ID	
5. Transporter 1 Company Name ROBBIE D. WOOD, INC.		6. US EPA ID Number ALD06713009		D. Transporter's Phone (905) 741-8443		E. State Transporter's ID
7. Transporter 2 Company Name		8. US EPA ID Number		F. Transporter's Phone		G. State Transporter's ID
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. HWY. 73, 3 1/2 MILES W. OF TAYLORS BAYOU PORT ARTHUR TX 77640			10. US EPA ID Number TXD00083889		H. Facility's Phone (409) 336-2821	
11A. HM Number	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
	a. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SOIL WITH <50 PPM PCBs), UN3077, 9, PG. III	001	38160	P	OUTS3941	
	b.					
	c.					
	d.					
15. Special Handling instructions and Additional Information EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE EMERGENCY RESPONSE GUIDE #31				K. Handling Codes for Wastes Listed Above		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Eugene H Jones		Signature <i>Eugene H Jones</i>		Month Day Year 10 5 2 19 95		
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name Wanda Wilson		Signature <i>Wanda Wilson</i>		Month Day Year 10 5 23 19 95		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.						
Printed/Typed Name		Signature		Month Day Year		

GENERATOR

TRANSPORTER

CITY

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION P.O. Box 13087

In. Texas 78711-3087



Form approved, OMB No. 2050-0039, expires 09/30/96

a print or type. (Form designed for use on 8 1/2 inch (12-pitch) typewriter.)

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. TX 0000000000		Manifest Document No. 1000000000		2. Page 1 of		Information in the shaded areas is not required by Federal law.					
2. Generator's Name and Mailing Address DRMO-CAMP LEJEUNE US MARINE CORPS BASE CAMP LEJEUNE NC 28547						A. State Generator's Document Number 00799069							
4. Generator's Phone (919) 451-5063						B. State Generator's ID							
5. Transporter 1 Company Name ROBBIE D. WOOD, INC.			6. US EPA ID Number AL006713089			C. Transporter's ID			D. Transporter's Phone (285) 744-2440				
7. Transporter 2 Company Name			9. US EPA ID Number			E. Transporter's ID			F. Transporter's Phone				
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. HWY. 73, 3 1/2 MILES W. OF TAYLORS BAYOU PORT ARTHUR TX 77640						10. US EPA ID Number TX 0000000000							
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. NO ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SOIL WITH <50 PPM PCBs), UN3077, 9, PG. III						12. Containers No. Type 00 1 C N		13. Total Quantity 36560		14. Unit Wt/Vol P		15. Waste No. CUTS3941	
J. Additional Descriptions for Materials Listed Above SERVICE REQUEST NO. 270266-246-124195						K. Handling Codes for Wastes Listed Above							
15. Special Handling Instructions and Additional Information EMERGENCY CONTACT: 1-800-999-6710 DTN: 995-2790 JOHN RHYNE EMERGENCY RESPONSE GUIDE #31													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name Elisna H Jones				Signature <i>Elisna H Jones</i>				Month Day Year 10 5 12 39					
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name SHARON E. McDaniel				Signature <i>Sharon E. McDaniel</i>				Date 10 5 12 39					
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Date					
19. Discrepancy Indication Space													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.													
Printed/Typed Name								Signature				Date Month Day Year	



Please print or type. (Form designed for use on site (12-inch) typewriter.)

Form approved. OMB No. 2050-0039. expires 03/30/88

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. NCST700225A		Manifest Document No. 101087	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address DRMO-CAMP LEJEUNE US MARINE CORPS BASE CAMP LEJEUNE NC 28547 4. Generator's Phone (919) 451-5063					A. State Manifest Document Number 00799068			
5. Transporter 1 Company Name ROBBIE D. WOOD, INC.					6. US EPA ID Number ALD06713889		B. State Generator's ID 99937	
7. Transporter 2 Company Name					8. US EPA ID Number		C. State-Transporter's ID 40762	
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. HWY. 73, 3 1/2 MILES W. OF TAYLORS BAYOU PORT ARTHUR TX 77640					10. US EPA ID Number TXD00083889		D. Transporter's Phone (205) 744-8440	
					E. State-Transporter's ID		F. Transporter's Phone	
					G. State Facility's ID 50212		H. Facility's Phone (409) 736-2821	
11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)			12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	a. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SOIL WITH <50 PPM PCBs), UN3077, 9, PG. III			001	CM	35160	P	OUTS3941
	b.							
	c.							
	d.							
J. Additional Descriptions for Materials Listed Above AR4721 SERVICE REQUEST NO. 220267330-5/24/95					K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE EMERGENCY RESPONSE GUIDE #31								
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name Eugene H Jones				Signature <i>Eugene H Jones</i>		Month Day Year 05 23 95		
17. Transporter 1 Acknowledgement of Receipt of Materials								
Printed/Typed Name Sharon Donaldson				Signature <i>Sharon Donaldson</i>		Month Day Year 05 23 95		
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month Day Year		
19. Discrepancy Indication Space								
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.								
Printed/Typed Name				Signature		Date Month Day Year		

W HO 2829

Form Approved DMB No. 2050-0032 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
NC 6 17 00 22 58 0

Manifest Document No.  
17086

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMPANING GENERAL**  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJUNE, NC 28540-0004

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone (901) 451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
ALD 0 67 13 88 91

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D. INC.**  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029

10. US EPA ID Number  
KYD 0 88 43 88 17

G. State Facility's ID  
H. Facility's Phone 502-395-6313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type  
13. Total Quantity  
14. Unit Wt/Vol  
15. Waste No.

a. **HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DDT)**

DT  
47780  
P  
U061

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**2) -M42-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE**  
**EMERGENCY RESPONSE GUIDE# 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **Eugene H Jones** Signature *Eugene H Jones* Month Day Year **10 5 2 49 5**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name **ERNEST W. STREET** Signature *Ernest W Street* Month Day Year **10 5 2 4 95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name **John P. Walker** Signature *John P. Walker* Month Day Year **10 5 2 5 95**

GENERATOR

TRANSPORTER

FACILITY

UHO 2778

Please Print or Type in Black Ink  
Form designed by EPA, 1990  
EPA Form 354 (Rev. 10-92)  
EPA Approved OMB No. 2050-0038 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N C 6 1 7 0 0 2 2 5 8 0  
Manifest Document No.  
7 7 8 8 7

2. Page 1 of 1 \* Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELNE, NC 28540-0004

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( 901-451-1809

5. Transporter 1 Company Name  
ROBBIE WOOD, INC.

6. US EPA ID Number  
A L D 0 6 7 1 3 8 8 9 1

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029

10. US EPA ID Number  
K Y D 0 8 8 4 3 8 8 1 7

G. State Facility's ID  
H. Facility's Phone 502-395-8313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type  
1 DT  
13. Total Quantity 45.720  
14. Unit Wt/Vol P  
15. Waste No. U061

a. RM, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
U061

K. Handling Codes for Wastes Listed Above  
T06/T07

15. Special Handling Instructions and Additional Information  
EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name Eugene H Jones Signature Eugene H Jones Month Day Year 10 5 2 4 9 5

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name Michael D. Davidson Signature Michael D. Davidson Month Day Year 05 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space  
\* Item 2 per John Rhine / omm, 5-31-95, LH/LWD

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name John P. Walker Signature John P. Walker Month Day Year 05 25 95

GENERATOR

TRANSPORTER

FACILITY

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N.C. 6.17.00.22.58.0  
Manifest Document No.  
27088

2. Page 1 of 1 \* Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( 901-451-1809

5. Transporter 1 Company Name  
ROBBIE WOOD, INC.

6. US EPA ID Number  
A.L.D. 0.67.13.88.9.1

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029

10. US EPA ID Number  
K.Y.D. 0.88.43.88.1.7

G. State Facility's ID  
H. Facility's Phone 502-395-8313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers	13. Total Quantity	14. Unit Wt/Val	1. Waste No.
HMI	No.	Type		
a. <b>HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DOT)</b>	1	DT	4482.0	U061
b.				
c.				
d.				

12. Containers	13. Total Quantity	14. Unit Wt/Val	1. Waste No.
No.	Type		
1	DT	4482.0	U061

J. Additional Descriptions for Materials Listed Above  
a) .FM2-U061

K. Handling Codes for Wastes Listed Above  
T06/T07

15. Special Handling Instructions and Additional Information  
EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
Eugene H Jones

Signature  
Eugene H Jones  
Month Day Year  
10 31 95

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
BARRY L SWANN

Signature  
Barry L Swann  
Month Day Year  
10 31 95

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature  
Month Day Year

19. Discrepancy Indication Space  
\* Item 2 per John Rhine /OHM, 5-31-95, LH/LWD

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
John P Walker

Signature  
John P Walker  
Month Day Year  
10 31 95

GENERATOR

TRANSPORTER

FA

UHC 2831, LHC 2832

Please Print or Type  
Form designed for use with EPA Form 3520-102 (Rev. 11/92)

Printed and Published by the Environmental Protection Agency  
Paper Approved: OMB No. 2060-0039, Expires 9-30-94

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. N C 6 1 7 0 0 2 2 5 8 0	Manifest Document No. 27089	2. Page 1 of 1	* Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address COMMANDING GENERAL ATTN: AC/S EMD/IRD MARINE CORPS BASE PSC BOX 20004 CAMP LEJUNE, NC 28540-0004		4. Generator's Phone ( 901-451-1809		A. State Manifest Document Number	
5. Transporter 1 Company Name ROBBIE WOOD, INC.		6. US EPA ID Number A L D 0 6 7 1 3 8 8 9 1		C. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 205-744-8440	
9. Designated Facility Name and Site Address L W D, INC. HIGHWAY 1523 CALVERT CITY, KENTUCKY 42029		10. US EPA ID Number K Y D 0 8 8 4 3 8 8 1 7		E. State Transporter's ID	
				F. Transporter's Phone	
				G. State Facility's ID	
				H. Facility's Phone 502-395-8313	

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Val	1. Waste No.
	No.	Type			
(HM) a. <b>RG, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DOT)</b>	1	DT	4.4-1.00	P	UD61
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above D-RMK2-UD61	K. Handling Codes for Wastes Listed Above T06/T07
--	--

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
 EMERGENCY RESPONSE GUIDEN 31**

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name: Eugene H Jones  
 Signature: Eugene H Jones  
 Month Day Year: 05 24 95

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: Willie Fortner  
 Signature: Willie Fortner  
 Month Day Year: 05 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Month Day Year: \_\_\_\_\_

19. Discrepancy Indication Space  
 \* 2 per John Rhine / OHM, 5-31-95, LH/LWD

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name: Chris Dunningan  
 Signature: Chris Dunningan  
 Month Day Year: 05 24 95

GENERATOR  
TRANSPORTER  
FACILITY

# 46

UHG 2840

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N.C. 6-1-7-0-0-2-2-5-8-0  
Manifest Document No. 01090

2. Page 1 of 1 \* Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone (901) 451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
A.L.D. 0-6-7-1-3-8-8-9-1

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
K.Y.D. 0-8-8-4-3-8-8-1-7

G. State Facility's ID  
H. Facility's Phone 502-395-8313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
HM1

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Val 15. Waste No.

a. **RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)**

1 1T 450.00 P U061

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**1) HM12-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

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Printed/Typed Name  
**Eugene H Jones**

Signature *Eugene H Jones* Month Day Year 05 25 95

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Edward Ivory**

Signature *Edward Ivory* Month Day Year 5 25 95

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space  
**\* Item 2 per John Rhine / OHM, 5-31-95, LH / LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature *John P. Walker* Month Day Year 05 26 95

GENERATOR

TRANSPORTER

FACILITY

#28

WH 2841

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6-1-7-0-0-2-2-5-8-0** Manifest Document No. **0109**

2. Page 1 of 1 \* Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
5. Transporter 1 Company Name **ROBBIE WOOD, INC.**  
6. US EPA ID Number **A-L-D-0-6-7-1-3-8-8-9-1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name  
8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L M D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 40029**  
10. US EPA ID Number **K-Y-D-0-8-8-4-3-8-8-1-7**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
**HM**

12. Containers No. Type  
13. Total Quantity  
14. Unit Wt/Vol  
15. Waste No.

a. **RQ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)**

**1 DT**  
**42240**  
**P**  
**UD51**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**2) HM42-UD51**

K. Handling Codes for Wastes Listed Above  
**T05/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDELINE 31**

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OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**L Eugene H Jones**

Signature  
*L Eugene H Jones* Month Day Year  
**05 25 95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Jerome Felton**

Signature  
*Jerome Felton* Month Day Year  
**5 28 95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space  
**\* Item 2 per John Rhine / OHM, 5-31-95, LH/LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name  
**John P. Walker**

Signature  
*John P. Walker* Month Day Year  
**05 26 95**

GENERATOR

TRANSPORTER

FACILITY

# 26

WHD 2842, ~~00000000~~ 73

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
**N C 6 1 7 0 0 2 2 5 8 0**

Manifest Document No.  
**0 1 0 7 2**

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
 ATTN: AC/S EMD/IRD  
 MARINE CORPS BASE PSC BOX 20004  
 CAMP LEJEUNE, NC**

A. State Manifest Document Number

B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
**A L D 0 6 7 1 3 8 8 9 1**

C. State Transporter's ID

D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
 HIGHWAY 1523  
 CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
**K Y D 0 8 8 4 3 8 8 1 7**

G. State Facility's ID

H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	No.	Type			
a. <b>HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)</b>	1	DT	475.60	P	U061
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
 EMERGENCY RESPONSE GUIDE# 31**

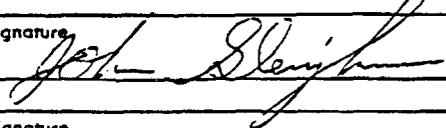
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Printed/Typed Name  
**Eugene H Jones**

Signature  


Month Day Year  
**10 5 2 1995**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name  
**John Sleightman**

Signature  


Month Day Year  
**5 25 95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name

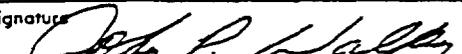
Signature

Month Day Year

19. Discrepancy Indication Space  
**\* Item 2 per John Rhine / OHR, 5-31-95, LH/LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P Walker**

Signature  


Month Day Year  
**05 26 95**

GENERATOR

TRANSPORTER

OWNER

W402834

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6 1 7 0 0 2 2 5 8 0** Manifest Document No. **D1093**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809**

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name

6. US EPA ID Number  
**A L D 0 6 7 1 3 8 8 9 1**

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

8. US EPA ID Number  
**K Y D 0 8 8 4 3 8 8 1 7**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol 15. Waste No.

a. **RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)**

**1 DT 4.5.9.4.0 P U061**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**a) .M42-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

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Printed/Typed Name  
**Eugene H Jones**

Signature  
*Eugene H Jones* Month Day Year **05 25 95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Bobby L Haga JR**

Signature  
*Bobby L Haga* Month Day Year **05 25 95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space  
**\* Item 2 per John Rhine / OUM, 5-31-95, LH/LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P Walker**

Signature  
*John P Walker* Month Day Year **05 26 95**

GENERATOR  
TRANSPORTER  
FACILITY

#34

WH02839

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

NC 6.1.7.0.0.2.2.5.8.0

Manifest Document No. **01095**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number

B. State Generator's ID

4. Generator's Phone ( **901-451-1809**

5. Transporter 1 Company Name

**ROBBIE WOOD, INC.**

6. US EPA ID Number

**A.L.D. 0.6.7.1.3.8.8.9.1**

C. State Transporter's ID

D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number

**K.Y.D. 0.8.8.4.3.8.8.1.7**

G. State Facility's ID

H. Facility's Phone

**502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

HM

a. **RQ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DOT)**

12. Containers  
No. Type

1

DT

13. Total Quantity

**4.6.30.0**

14. Unit Wt/Val

P

I. Waste No.

**U061**

J. Additional Descriptions for Materials Listed Above

**U061**

K. Handling Codes for Wastes Listed Above

**T06/T07**

15. Special Handling Instructions and Additional Information

**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

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Printed/Typed Name

**Eugene H Jones**

Signature

*Eugene H Jones*

Month Day Year

**05 25 95**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

**Sinreatha Hall**

Signature

*Sinreatha Hall*

Month Day Year

**05 25 95**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

**\* Item 1 (manu doc #) + 2 per John Rhine /OHM, 5-31-95, LH/LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

**John P. Walker**

Signature

*John P. Walker*

Month Day Year

**05 26 95**

GENERATOR

TRANSPORTER

FACILITY

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6.17.00.22.58.0** Manifest Document No. **01097**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S END/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
5. Transporter 1 Company Name **ROBBIE WOOD, INC.**  
6. US EPA ID Number **A.L.D. 0.6.7.1.3.8.8.9.1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name  
8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**  
10. US EPA ID Number **K.Y.D. 0.8.8.4.3.8.8.1.7**

G. State Facility's ID  
H. Facility's Phone **502-395-6313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
**HM**

12. Containers  
13. Total Quantity  
14. Unit Wt/Vol  
15. Waste No.

a. **RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)**

**1 DT 4.3.7.60 P U061**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature  
*Eugene H Jones* Month Day Year **10-5-83 11-95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Donald R. McDaniel**

Signature  
*Donald R. McDaniel* Month Day Year **10-5-83 11-95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature  
*John P. Walker* Month Day Year **10-12-95**

GENERATOR  
TRANSPORTER  
FACILITY

2857  
2860

Form designed for IBM or other (12x36) typewriter

Form Approved OMB No. 2050-0039, Expires 9-30-84

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N.C. 6.1.7.0.0.2.2.5.8.0  
Manifest Document No. 01-099

2. Page 1 of 1  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EPD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone (901-451-1809)  
5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

C. State Transporter's ID  
D. Transporter's Phone  
**205-744-8440**

6. US EPA ID Number  
**A.L.D. 0.6.7.1.3.8.8.9.1**

7. Transporter 2 Company Name  
8. US EPA ID Number  
9. Designated Facility Name and Site Address  
**L.W.D. INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

E. State Transporter's ID  
F. Transporter's Phone  
G. State Facility's ID  
H. Facility's Phone  
**502-395-6313**

10. US EPA ID Number  
**K.Y.D. 0.8.8.4.3.8.8.1.7**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <b>RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGII, (CONTAINS DOT)</b>	1	DT	4566.0	P	UD61
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**UD61**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDE# 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name: **Eugene H Jones** Signature: *Eugene H Jones* Month Day Year: **10-6-01-95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name: **BOBBY WAMBLE** Signature: *Bobby Wamble* Month Day Year: **10-6-01-95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name: **John P. Walker** Signature: *John P. Walker* Month Day Year: **10-6-01-95**

GENERATOR

TRANSPORTER

FACILITY

2861 2862

Form Approved OMB No. 2050-0039 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N C 6 . 1 . 7 . 0 . 0 . 2 . 2 . 5 . 8 . 0

Manifest Document No.  
D . 1 . 1 . 0 . 0

2. Page 1 of 1  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( 901-451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

6. US EPA ID Number  
**A . L . D . 0 . 6 . 7 . 1 . 3 . 8 . 8 . 9 . 1**

7. Transporter 2 Company Name

E. State Transporter's ID  
F. Transporter's Phone

8. US EPA ID Number

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

10. US EPA ID Number  
**K . Y . D . 0 . 8 . 8 . 4 . 3 . 8 . 8 . 1 . 7**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
a. <b>RM, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)</b>	1	DT	4.7.8.80	P	U061
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHINE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature  
*Eugene H Jones* Month Day Year  
**10 6 10 1995**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Richard Hayes**

Signature  
*R Hayes* Month Day Year  
**10 6 10 1995**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P Walker**

Signature  
*John P Walker* Month Day Year  
**10 6 02 95**

GENERATOR

TRANSPORTER

RECEIVER

Form Approved OMB No. 2050-0038 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6-1-7-0-0-2-2-5-8-001701** Manifest Document No.

2. Page 1 of 1 information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/TRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )

5. Transporter 1 Company Name **ROBBIE WOOD, INC.** 6. US EPA ID Number **A-L-D-0-6-7-1-3-8-8-9-1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name 8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
**RM, RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)**

12. Containers No. 1 Type DT 13. Total Quantity 45.4.00 14. Unit Wt/Val P 15. Waste No. U061

a.	b.	c.	d.

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name **Eugene H Jones** Signature *Eugene H Jones* Month Day Year **06 10 1995**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name **ALAN VARNADOE** Signature *Alan Varnadoe* Month Day Year **06 10 1995**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name **John P. Walker** Signature *John P. Walker* Month Day Year **06 02 95**

GENERATOR  
TRANSPORTER  
FACILITY

2855 2854

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
**NC 6 1 7 0 0 2 2 5 8 0**

2. Page 1 of 1  
Manifest Document No. **01702**  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
**A.L.D. 0 6 7 1 3 8 8 9 1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
**K.Y.D. 0 8 8 4 3 8 8 1 7**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
13. Total Quantity  
14. Unit Wt/Val  
15. Waste No.

a. **RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)**

No. **1** Type **DT** Quantity **47.500** Unit **P** Waste No. **U061**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**a) .H42-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature *Eugene H Jones* Month Day Year **0 6 10 1 19 5**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Ray James Turner Jr.**

Signature *Ray James Turner Jr.* Month Day Year **6 1 19 5**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature *John P. Walker* Month Day Year **06 0 2 1 9 5**

GENERATOR

TRANSPORTER

FACTORY

Y

2876 2877

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N C 6 1 7 0 0 2 2 5 8 0

Manifest Document No.  
0 1 1 0 5

2. Page 1 of 1 \*

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name  
ROBBIE WOOD, INC.

6. US EPA ID Number  
A L D 0 6 7 1 3 8 8 9 1

C. State Transporter's ID

D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address  
L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029

10. US EPA ID Number  
K Y D 0 8 8 4 3 8 8 1 7

G. State Facility's ID

H. Facility's Phone 502-395-6313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
1	DT	45.960	P	U061

HM  
a. RI, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGII, (CONTAINS DDT)

J. Additional Descriptions for Materials Listed Above  
a) HM2-U061

K. Handling Codes for Wastes Listed Above  
T06/T07

15. Special Handling Instructions and Additional Information

EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHINE  
EMERGENCY RESPONSE GUIDEN 31

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Printed/Typed Name

Eugene H Jones

Signature

Month Day Year

06 05 95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Mike Thomas

Signature

Month Day Year

06 06 95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

\* 2 per John Rhine / OWM, 6-8-95, LH/LWD

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

John P Walker

Signature

Month Day Year

06 06 95

GENERATOR

TRANSPORTER

RECEIVED

Y

2822 2823

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N C 6 1 7 0 0 2 2 5 8 0

Manifest Document No.  
01106

2. Page 1 of 1 \*

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL**  
**ATTN: AC/S EMD/IRD**  
**MARINE CORPS BASE PSC BOX 20004**  
**CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number

B. State Generator's ID

4. Generator's Phone ( 901-451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
A L D 0 6 7 1 3 8 8 9 1

C. State Transporter's ID

D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.**  
**HIGHWAY 1523**  
**CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
K Y D 0 8 8 4 3 8 8 1 7

G. State Facility's ID

H. Facility's Phone **502-395-6313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

13. Total Quantity

14. Unit Wt/Vol

1. Waste No.

a. **HAZ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)**

No. 1

Type DT

Quantity 96580

Unit Wt/Vol P

Waste No. U061

b.

No.

Type

Quantity

Unit Wt/Vol

Waste No.

c.

No.

Type

Quantity

Unit Wt/Vol

Waste No.

d.

No.

Type

Quantity

Unit Wt/Vol

Waste No.

J. Additional Descriptions for Materials Listed Above  
**2) HMK2-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE**  
**EMERGENCY RESPONSE GUIDEN 31**

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OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature  
*Eugene H Jones*

Month Day Year  
**10 6 95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Keith Mutchler**

Signature  
*Keith Mutchler*

Month Day Year  
**10 6 95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space  
**\*Item 2 per John Rhine / OHR, 6-8-95, LH/LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature  
*John P. Walker*

Month Day Year  
**10 6 95**

GENERATOR  
TRANSPORTER  
RECEIVER

W 110 2880 W 110 2887

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N C . 6 . 1 . 7 . 0 . 0 . 2 . 2 . 5 . 8 . 0  
Manifest Document No.  
D . T . T . 0 . 7

2. Page 1 of 1 \* Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMO/3RD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( 901-451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
A . L . D . 0 . 6 . 7 . 1 . 3 . 8 . 8 . 9 . 1

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name  
8. US EPA ID Number  
9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
K . Y . D . 0 . 8 . 8 . 4 . 3 . 8 . 8 . 1 . 7

E. State Transporter's ID  
F. Transporter's Phone  
G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Val	1. Waste No.
	No.	Type			
a. <b>HAZ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)</b>	1	DT	48640	P	LD61
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**LD61**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

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If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;  
OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **Eugene H Jones** Signature: *Eugene H Jones* Month Day Year: **10/6/05**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name: **Richard Hayes** Signature: *Richard Hayes* Month Day Year: **10/6/05**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space  
**\* 2 per John Rhine / O4M, 6-8-95, LH/CW3**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name: **John P. Walker** Signature: *John P. Walker* Month Day Year: **10/6/05**

GENERATOR  
TRANSPORTER  
RECEIVER

2874 2875

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N.C. 6.17.00.22.58.0

Manifest Document No.  
01708

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMPANDING GENERAL**  
ATTN: AC/S END/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJUNE, NC 28540-0004

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone (901) 451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
A.L.D. 0.67.13.88.9.1

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.**  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029

10. US EPA ID Number  
K.Y.D. 0.88.43.88.1.7

G. State Facility's ID  
H. Facility's Phone 502-395-8313

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
13. Total Quantity  
14. Unit Wt/Vol  
15. Waste No.

a. **RG. HAZARDOUS WASTE SOLID, N.O.S., 9. NA3077, PGIII, (CONTAINS DOT)**

1 1T 46320 P U061

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHINE**  
**EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name  
**Eugene A Jones**

Signature  
*Eugene A Jones* Month Day Year  
10/6/95

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Sheila Sutton**

Signature  
*Sheila Sutton* Month Day Year  
10/5/95

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature  
Month Day Year

19. Discrepancy Indication Space  
**\* Item 2 per John Rhine/owner, 6-8-95, WH/LWD**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature  
*John P. Walker* Month Day Year  
06/26/95

GENERATOR

TRANSPORTER

RECEIVED

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No.  
**NC 6.17.00.22.58.0**

Manifest Document No.  
**01709**

2. Page 1 of 1 \* Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
 ATTN: AC/S EPD/IRD  
 MARINE CORPS BASE PSC BOX 20004  
 CAMP LEJEUNE, NC**

A. State Manifest Document Number  
 B. State Generator's ID

4. Generator's Phone ( **901-451-1809**

6. US EPA ID Number  
**28540-0004**

C. State Transporter's ID  
 D. Transporter's Phone **205-744-8440**

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

7. Transporter 2 Company Name  
**A.L.D. 0.6.7.1.3.8.8.9.1**

E. State Transporter's ID  
 F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
 HIGHWAY 1523  
 CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
**K.Y.D. 0.8.8.4.3.8.8.1.7**

G. State Facility's ID  
 H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
 13. Total Quantity  
 14. Unit Wt/Val  
 15. Waste No.

(HM)	No.	Type	Quantity	Unit Wt/Val	Waste No.
a.	1	DT	4.63.00	P	U051
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**U051**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

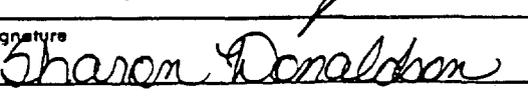
15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
 EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;  
 OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature  
 Month Day Year  
**10/6/05**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name  
**Sharon Donaldson**

Signature  
 Month Day Year  
**10/6/05**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name

Signature  
 Month Day Year

19. Discrepancy Indication Space  
**\* Item 2 per John Rhine / ODM, 6-8-95, LH/LWB**

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature  
 Month Day Year  
**10/6/05**

GENERATOR  
TRANSPORTER  
FACILITY

33  
2

2894

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N.C. 6.17.0.0.2.2.5.8.0  
Manifest Document No. 07714

2. Page 1 of Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone (901-451-1809)  
5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

6. US EPA ID Number  
**A.L.D. 0.6.7.1.3.8.8.9.1**

E. State Transporter's ID  
F. Transporter's Phone

7. Transporter 2 Company Name  
8. US EPA ID Number  
9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

G. State Facility's ID  
H. Facility's Phone 502-395-8313

10. US EPA ID Number  
**K.Y.D. 0.8.8.4.3.8.8.1.7**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
HMI	No.	Type		
a. <b>RD, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PEIII, (CONTAINS DDT)</b>	1	DT	48.000	U061
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name **Eugene H Jones** Signature *Eugene H Jones* Month Day Year **10-6-08 95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name **ERNEST W. STREET** Signature *Ernest W. Street* Month Day Year **10-6-08 95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month Day Year \_\_\_\_\_

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name **John P. Walker** Signature *John P. Walker* Month Day Year **10-6-08 95**

UNIFORM HAZARDOUS WASTE MANIFEST

85  
1

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6 1 7 0 0 2 2 5 8 0**  
Manifest Document No. **01115**

2. Page 1 of 1  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
5. Transporter 1 Company Name **ROBBIE WOOD, INC.**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

6. US EPA ID Number  
**A L D 0 6 7 1 3 8 8 9 1**

7. Transporter 2 Company Name  
8. US EPA ID Number  
9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

E. State Transporter's ID  
F. Transporter's Phone  
G. State Facility's ID  
H. Facility's Phone **502-395-8913**

10. US EPA ID Number  
**K Y D 0 8 8 4 3 8 8 1 7**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
	No.	Type			
a. <b>HMI RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)</b>	<b>1</b>	<b>DT</b>	<b>4.6.7.6.0</b>	<b>P</b>	<b>U061</b>
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDE# 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name **Eugene H Jones** Signature **Eugene H Jones** Month Day Year **10/6/95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name **GARY CAMPBELL #85** Signature **Gary Campbell** Month Day Year **10/6/95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month Day Year \_\_\_\_\_

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name **John P Walker** Signature **John P Walker** Month Day Year **10/6/95**

GENERATOR

TRANSPORTER

RECEIVER

2391

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6 1 7 0 0 2 2 5 8 0** Manifest Document No. **01776**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
5. Transporter 1 Company Name **ROBBIE WOOD, INC.** 6. US EPA ID Number **A-L-D 0 6 7 1 3 8 8 9 1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name 8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029** 10. US EPA ID Number **K Y D 0 8 8 4 3 8 8 1 7**

G. State Facility's ID  
H. Facility's Phone **502-395-6313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
HAZ	No.	Type		
a. <b>RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)</b>	<b>1</b>	<b>DT</b>	<b>45140</b>	<b>U061</b>
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above  
**HAZ-UM42-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name  
**Eugene H Jones**

Signature *Eugene H Jones* Month Day Year **10 6 1995**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**TERRY DONALDSON**

Signature *Terry Donaldson* Month Day Year **10 6 1995**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature *John P. Walker* Month Day Year **10 6 1995**

GENERATOR

TRANSPORTER

FACILITY

# UNIFORM HAZARDOUS WASTE MANIFEST

T. Generator's US EPA ID No.  
N.C. 6.17.00.22.58.0  
Manifest Document No.  
07117

2. Page 1 of Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( 901-451-1809  
5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

C. State Transporter's ID  
D. Transporter's Phone  
**205-744-8440**

6. US EPA ID Number  
**A.L.D. 0.6.7.1.3.8.8.9.1**

7. Transporter 2 Company Name  
8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

G. State Facility's ID  
H. Facility's Phone  
**502-395-8313**

10. US EPA ID Number  
**K.Y.D. 0.8.8.4.3.8.8.1.7**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. <b>HAZ</b> RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)	1	DT	47.66-0	P	U061
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above  
**U061-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name  
**Eugene H Jones**  
Signature  
*Eugene H Jones*  
Month Day Year  
**06/08/95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Kenneth J Donaldson**  
Signature  
*Kenneth J Donaldson*  
Month Day Year  
**06/08/95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
Signature  
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**  
Signature  
*John P. Walker*  
Month Day Year  
**06/08/95**

GENERATOR  
TRANSPORTER  
FAS  
TY

4110

2393

Approved by OMB No. 2050-0039 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N C . 6 . 1 . 7 . 0 . 0 . 2 . 2 . 5 . 8 . 0

Manifest Document No. 01118

2. Page 1 of Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EPD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( 901-451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
A . L . D . 0 . 6 . 7 . 1 . 3 . 8 . 8 . 9 . 1

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
K . Y . D . 0 . 8 . 8 . 4 . 3 . 8 . 8 . 1 . 7

G. State Facility's ID  
H. Facility's Phone 502-395-8313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol 15. Waste No.

a. **RQ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DDT)**

1 1 DT 48.040 P U061

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**a) HM2-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name  
**Eugene H Jones**

Signature *Eugene H Jones* Month Day Year 10-6-1995

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Richard Hayes**

Signature *Richard Hayes* Month Day Year 10-6-1995

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**P. Walker**

Signature *P. Walker* Month Day Year 10-09-95

GENERATOR

TRANSPORTER

FACTOR

TY

W1402912

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6-1-7-0-0-2-2-5-8-0** Manifest Document No. **01122**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
5. Transporter 1 Company Name **ROBBIE WOOD, INC.** 6. US EPA ID Number **A-L-D-0-6-7-1-3-8-8-9-1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name 8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029** 10. US EPA ID Number **K-Y-D-0-8-8-4-3-8-8-1-7**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol 15. Waste No.

a. **RM, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DOT)**

**1 DT 43900 P U061**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**RM U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDE 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;  
OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature *Eugene H Jones* Month Day Year **10 6 14 95**

17. Transporter 1 Acknowledgment of Receipt of Materials  
Printed/Typed Name  
**Edward Ivory**

Signature *Edward Ivory* Month Day Year **10 6 14 95**

18. Transporter 2 Acknowledgment of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature *John P. Walker* Month Day Year **10 6 15 95**

GENERATOR

TRANSPORTER

FACTORY

Y

W H 0 2 9 2 0

W 1 0 2 9 2

Form Approved OMB No. 2050-0039 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
**N C 6 1 7 0 0 2 2 5 8 0 0 1 1 2 5**

2. Page 1 of 1  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC**

4. Generator's Phone ( **901-451-1809** )  
**285-40-0004**

A. State Manifest Document Number  
B. State Generator's ID

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
**A.L.D. 0.6.7.1.3.8.8.9.1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
**K.Y.D. 0.8.8.4.3.8.8.1.7**

G. State Facility's ID  
H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
**RM**  
a. **RQ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PEIII, (CONTAINS DOT)**

12. Containers  
Na. Type  
**1 DT**

13. Total Quantity  
**4.6.4.4.0**

14. Unit Wt/Vol  
**P**

15. Waste No.  
**U061**

J. Additional Descriptions for Materials Listed Above  
**2) RM2-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name  
**Eugene H Jones**

Signature  
*Eugene H Jones*

Month Day Year  
**10-6-11-519-5**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**George Parker**

Signature  
*George Parker*

Month Day Year  
**10-6-11-519-5**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name  
**John P. Walker**  
Signature  
*John P. Walker*  
Month Day Year  
**10-6-11-519-5**

GENERATOR  
TRANSPORTER  
FACILITY

W170 2922

W170 2923

Form Approved OMB No. 2050-0039 Expires 9-30-94

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **NC 6-17-00-22-58-01** Manifest Document No. **01-126**

2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EHD/IRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJELINE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
5. Transporter 1 Company Name **ROBBIE WOOD, INC.**  
6. US EPA ID Number **A-L-D-0-6-7-1-3-8-8-9-1**

C. State Transporter's ID  
D. Transporter's Phone **205-744-8440**

7. Transporter 2 Company Name  
8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**  
10. US EPA ID Number **K-Y-D-0-8-8-4-3-8-8-1-7**

G. State Facility's ID  
H. Facility's Phone **502-395-6313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
**HMI**

12. Containers No. Type  
13. Total Quantity  
14. Unit Wt/Val  
15. Waste No.

a. **RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII, (CONTAINS DOT)**

**1 DT 49.1.20 P U061**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name  
**Eugene H Jones**

Signature *Eugene H Jones* Month Day Year **06/11/95**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Kenneth J. Donaldson**

Signature *Kenneth J Donaldson* Month Day Year **06/11/95**

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**John P. Walker**

Signature *John P. Walker* Month Day Year **06/16/95**

GENERATOR

TRANSPORTER

FACILITY

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.  
N.C. 6-1-7-0-0-2-2-5-8-0

2. Page 1 of 1  
Manifest Document No. 0-1-12-7  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
ATTN: AC/S EMD/DRD  
MARINE CORPS BASE PSC BOX 20004  
CAMP LEJEUNE, NC 28540-0004**

A. State Manifest Document Number  
B. State Generator's ID

4. Generator's Phone (901) 451-1809

5. Transporter 1 Company Name  
**ROBBIE WOOD, INC.**

6. US EPA ID Number  
A.L.D. 0-6-7-1-3-8-8-9-1

C. State Transporter's ID  
D. Transporter's Phone 205-744-8440

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID  
F. Transporter's Phone

9. Designated Facility Name and Site Address  
**L W D, INC.  
HIGHWAY 1523  
CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number  
K.Y.D. 0-8-8-4-3-8-8-1-7

G. State Facility's ID  
H. Facility's Phone 502-395-6313

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
HM

12. Containers  
No. Type  
13. Total Quantity  
14. Unit Wt/Vol  
15. Waste No.

a. **RQ. HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DOT)**

4-9-7-40  
P UD61

b.

c.

d.

J. Additional Descriptions for Materials Listed Above  
**UD61**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYME  
EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name  
**Eugene H Jones**

Signature  
*Eugene H Jones*  
Month Day Year  
10-6-11 5-19-93

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name  
**Donnie White**

Signature  
*Donnie White*  
Month Day Year  
10-6-11 5-19-93

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name

Signature  
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name  
**John P Walker**

Signature  
*John P Walker*  
Month Day Year  
10-6-11 5-19-93

GENERATOR

TRANSPORTER

RECEIVED

DATE

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **NC 6-17-00-22-58-001155**

2. Page 1 of 1  
 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**COMMANDING GENERAL  
 ATTN: AC/S EMD/IRD  
 MARINE CORPS BASE PSC BOX 20004  
 CAMP LEJEUNE, NC 28540-0004**

A. State Manifest Document Number  
 B. State Generator's ID

4. Generator's Phone ( **901-451-1809** )  
 5. Transporter 1 Company Name **ROBBIE WOOD, INC.**

C. State Transporter's ID  
 D. Transporter's Phone **205-744-8440**

6. US EPA ID Number **A.L.D. 0.6.7.1.3.8.8.9.1**

E. State Transporter's ID  
 F. Transporter's Phone

7. Transporter 2 Company Name  
 8. US EPA ID Number  
 9. Designated Facility Name and Site Address  
**L W D, INC.  
 HIGHWAY 1523  
 CALVERT CITY, KENTUCKY 42029**

10. US EPA ID Number **K.Y.D. 0.8.8.4.3.8.8.1.7**  
 G. State Facility's ID  
 H. Facility's Phone **502-395-8313**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  
**HM**

12. Containers  
 No. Type  
 13. Total Quantity  
 14. Unit Wt/Vol  
 1. Waste No.

a. **RQ, HAZARDOUS WASTE SOLID, N.O.S., 9, NA3077, PGIII. (CONTAINS DDT)**

**4 DTM**  
**1250**  
**P U061**

b.

c.

c.

d.

d.

J. Additional Descriptions for Materials Listed Above  
**HM4-U061**

K. Handling Codes for Wastes Listed Above  
**T06/T07**

15. Special Handling Instructions and Additional Information  
**EMERGENCY CONTACT: 1-800-999-6710 PIN: 995-2790 JOHN RHYNE  
 EMERGENCY RESPONSE GUIDEN 31**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.  
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Printed/Typed Name **Eugene H Jones** Signature *Eugene H Jones* Month Day Year **10-7-95**

17. Transporter 1 Acknowledgment of Receipt of Materials  
 Printed/Typed Name **Willie Fortner** Signature *Willie Fortner* Month Day Year **10-7-95**

18. Transporter 2 Acknowledgment of Receipt of Materials  
 Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name **John P. Walker** Signature *John P. Walker* Month Day Year **10-20-95**

GENERATOR

TRANSPORTER

FACILITY

BFI/SCD

# NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV  
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 883344



## GENERATOR (Generator completes all of Section I)

a. Generator Name: Commanding General b. Generating Location: SAME  
 c. Address: (Attn: AC/S EMD/John Riggs d. Address: \_\_\_\_\_  
Marine Corps Base, PSC Box 20004, Camp LeJeune, NC 28542-0004  
 e. Phone No.: (910) 451-5876 f. Phone No.: \_\_\_\_\_

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: \_\_\_\_\_ h. Owner's Phone No.: \_\_\_\_\_

i. BFI WASTE CODE 

1	0	1	2	1	6	0	5	1	1	7
---	---	---	---	---	---	---	---	---	---	---

 Containers 

2	3	5	3	1	2
---	---	---	---	---	---

  
 j. Description of Waste: Soil k. Quantity 

50	200
----	-----

 Units 

P
---

 No. 

11
----

 TYPE 

7
---

- TYPE**  
 DM - METAL DRUM  
 DP - PLASTIC DRUM  
 B - BAG  
 BA - 6 MIL. PLASTIC BAG or WRAP  
 T - TRUCK  
 O - OTHER
- UNITS**  
 P - POUNDS  
 Y - YARDS  
 M<sup>3</sup> - CUBIC METERS  
 Y<sup>3</sup> - CUBIC YARDS  
 O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

TS Morels Generator Authorized Agent Name  
[Signature] Signature  
11/21/95 Shipment Date

## SUBSECTION TRANSPORTER (Generator completes end; Transporter I completes end)

### TRANSPORTER I

a. Name: Hico Transport, Inc.  
 b. Address: 1024 East Mountain Street  
Kennersville, NC 27204  
 Driver Name/Title: John V. Lewis  
 d. Phone No.: (910) 993-2400 e. Truck No.: 93  
 f. Vehicle License No./State: LK 1795 NC  
 Acknowledgement of Receipt of Materials.

### TRANSPORTER II

a. Name: \_\_\_\_\_  
 b. Address: \_\_\_\_\_  
 Driver Name/Title: \_\_\_\_\_  
 d. Phone No.: \_\_\_\_\_ e. Truck No.: \_\_\_\_\_  
 f. Vehicle License No./State: \_\_\_\_\_  
 Acknowledgement of Receipt of Materials.

g. [Signature] Driver Signature 11/21/95 Shipment Date  
 h. \_\_\_\_\_ Driver Signature \_\_\_\_\_ Shipment Date

## SECTION III (Generator completes end; Destination and Operator I complete end)

a. Site Name: Campson County Disposal, Inc c. Phone No.: (910) 525-4132  
 b. Physical Address: 7434 Roseboro Hwy d. Mailing Address: 20 Box 2096  
Roseboro, NC 28382 Roseboro, NC 28382

e. Discrepancy Indication Space: \_\_\_\_\_

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

i. Evelyn M. Lavin Name of Asbestos Agent  
[Signature] Signature 11/21/95 Receipt Date

## SECTION IV ASBESTOS (Generator completes end; Operator I completes end)

a. Operator's Name: \_\_\_\_\_ b. Operator's Phone No.: \_\_\_\_\_

c. Operator's Address: \_\_\_\_\_

d. Special Handling Instructions and additional information: \_\_\_\_\_

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

Operator's Name & Title: \_\_\_\_\_ Operator's Signature \_\_\_\_\_  
 and Address \_\_\_\_\_

of Responsible Agency: \_\_\_\_\_

Friable;  Non-friable;  Both \_\_\_\_\_ % friable \_\_\_\_\_ % nonfriable



# NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.  
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 883346

## GENERATOR (Generator completes all of Section I)

a. Generator Name: Commanding General b. Generating Location: SAME  
 c. Address: (Attn: AC/S EMD/John Riggs  
Marine Corps Base, PSC Box 20004, Camp LeJeune, NC 28542-0004  
 e. Address: \_\_\_\_\_  
 d. Phone No.: (910) 451-5878 f. Phone No.: \_\_\_\_\_

g. Owner's Name: \_\_\_\_\_ h. Owner's Phone No.: \_\_\_\_\_  
 i. UFI WASTE CODE: 

1	0	2	1	0	0	1	1	7	2	3	0	3	1	2
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

 Containers: \_\_\_\_\_  
 Description of Waste: Soil k. Quantity: 36360 Unit: P No.: \_\_\_\_\_ TYPE: \_\_\_\_\_

- TYPE**
- DM - METAL DRUM
  - DP - PLASTIC DRUM
  - B - BAG
  - BA - 8 MIL. PLASTIC BAG OR WRAP
  - T - TRUCK
  - O - OTHER
- UNITS**
- P - POUNDS
  - Y - YARDS
  - M3 - CUBIC METERS
  - Y3 - CUBIC YARDS
  - O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Resolutions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

TSMorris Generator Authorized Agent Name  
[Signature] Signature  
11/21/95 Shipment Date

## TRANSPORTER (Generator completes a-d; Transporter I completes e-h; Transporter II completes i-l)

**TRANSPORTER I**

a. Name: Hilco Transport, Inc  
 b. Address: 1024 East Mountain Street  
Kannapolis, NC 27284  
 c. Driver Name/Title: Roger Hadgraft  
 d. Phone No.: (910) 993-2400 e. Truck No.: 41  
 f. Vehicle License No./State: LX-1983  
 Acknowledgement of Receipt of Materials:  
[Signature]  
11/21/95 Shipment Date

**TRANSPORTER II**

h. Name: \_\_\_\_\_  
 i. Address: \_\_\_\_\_  
 j. Driver Name/Title: \_\_\_\_\_  
 k. Phone No.: \_\_\_\_\_ l. Truck No.: \_\_\_\_\_  
 m. Vehicle License No./State: \_\_\_\_\_  
 Acknowledgement of Receipt of Materials:  
 n. Driver Signature: \_\_\_\_\_ Shipment Date: \_\_\_\_\_

## DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: Sampson County Disposal, Inc c. Phone No.: (910) 525-4132  
 b. Physical Address: 2134 Roseboro Hwy  
Roseboro, NC 28382 d. Mailing Address: PO Box 2096  
Roseboro, NC 28382  
 e. Discrepancy Indication Space: \_\_\_\_\_  
 I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.  
Evelyn McLaure Name of Authorized Agent  
[Signature] Signature  
11/21/95 Receipt Date

## ASBESTOS (Generator completes a-d; f, g; Operator\* completes h, i)

a. Operator's Name: \_\_\_\_\_ b. Operator's Phone No.: \_\_\_\_\_  
 c. Operator's Address: \_\_\_\_\_  
 d. Special Handling Instructions and additional information: \_\_\_\_\_

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, labeled, marked, and packaged, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

e. Operator's Name & Title: \_\_\_\_\_  
 f. Name and Address of Responsible Agency: \_\_\_\_\_



# NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

No. 883347

If waste is asbestos waste, complete Sections I, II, III and IV.  
If waste is NOT asbestos waste, complete only Sections I, II and III.

## GENERATOR (Generator completes all of Section I)

a. Generator Name: Commanding General b. Generating Location: SAME  
 c. Address: (Attn: AC/S EMD/John Riggs d. Address: \_\_\_\_\_  
Marine Corps Base, PSC Box 20004, Camp LeJeune, NC 28542-0004  
 e. Phone No.: (910) 451-5878 f. Phone No.: \_\_\_\_\_

If owner of the generating facility differs from the generator, provide:

g. Owner's Name: \_\_\_\_\_ h. Owner's Phone No.: \_\_\_\_\_

i. BFI WASTE CODE 

NC	2	1	6	9	6	1	1	7	2	3	8	3	1	2
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---

 Containers \_\_\_\_\_  
 j. Description of Waste: Soil k. Quantity 51320 Units 0 No. 1 TYPE 7

TYPE	
DM	METAL DRUM
DP	PLASTIC DRUM
B	BAG
BA	6 MIL PLASTIC BAG OF WRAP
T	TRUCK
O	OTHER

UNITS	
P	POUNDS
Y	YARDS
M <sup>3</sup>	CUBIC METERS
Y <sup>3</sup>	CUBIC YARDS
O	OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously regulated hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

IS Morris Generator Authorized Agent Name  
[Signature] Signature  
11/21/95 Shipment Date

## TRANSPORTER (Generator completes a-d; Transporter I completes e-g; Transporter II completes h-i)

**TRANSPORTER I**  
 a. Name: Wilco Transport, Inc  
 b. Address: 1024 East Mountain Street  
Kernersville, NC 27284  
 c. Driver Name/Title: Robert L Guthrie  
 d. Phone No.: (910) 993-2400 e. Truck No.: 384  
 f. Vehicle License No./State: LX 1993  
 Acknowledgement of Receipt of Materials:  
Robert Guthrie 11/21/95  
 Driver Signature Shipment Date

**TRANSPORTER II**  
 h. Name: \_\_\_\_\_  
 i. Address: \_\_\_\_\_  
 j. Driver Name/Title: \_\_\_\_\_  
 k. Phone No.: \_\_\_\_\_ l. Truck No.: \_\_\_\_\_  
 m. Vehicle License No./State: \_\_\_\_\_  
 Acknowledgement of Receipt of Materials:  
 \_\_\_\_\_  
 Driver Signature Shipment Date

## DESTINATION (Generator completes a-d; destination site completes e-f)

a. Site Name: Sampson County Disposal, Inc c. Phone No.: (910) 525-4132  
 b. Physical Address: 7434 Roseboro Hwy d. Mailing Address: PO Box 2095  
Roseboro, NC 28382 Roseboro, NC 28332  
 e. Discrepancy Indication Space: \_\_\_\_\_

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Evelyn McLaurea [Signature] 11/21/95  
 Name of Authorized Agent Signature Receipt Date

## ASBESTOS (Generator completes a-d; Operator\* completes e-f)

a. Operator's Name: \_\_\_\_\_ b. Operator's Phone No.: \_\_\_\_\_  
 c. Operator's Address: \_\_\_\_\_  
 Special Handling Instructions and additional information: \_\_\_\_\_

OPERATOR'S CERTIFICATION: I hereby declare that the contents of this agreement are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

d. Operator's Name & Title: \_\_\_\_\_ Operator's Signature \_\_\_\_\_ Date \_\_\_\_\_  
 e. Name and Address of Responsible Agency: \_\_\_\_\_

**Appendix D**  
**Disposal Certification**

CHEMICAL WASTE MANAGEMENT  
Federal EPA ID: TXD00838896  
State EPA ID: 50212-001  
Highway 73  
PORT ARTHUR, TX 77643  
(409) 736-2821

DRMO-CAMP LEJEUNE  
ATTN: MANIFEST SECTION  
NC6170022580  
US MARINE CORPS BASE  
CAMP LEJEUNE NC 28547

CERTIFICATE OF DESTRUCTION

Chemical Waste Management, Inc. has received waste material from DRMO-CAMP LEJEUNE on 05/24/95 as described on (State Manifest or Uniform) Hazardous Waste Manifest number 0000799072 Sequence number 01. Chemical Waste Management, Inc., hereby certifies that the above described material was incinerated and thereby destroyed in accordance with the 40 CFR part 761 as it pertains to the incineration of Poly-Chlorinated Biphenyl contaminated materials.

Profile Number: AR4721  
CWM Tracking ID: 52201101  
Treatment Date: 05/31/95  
CWM Unit #: 1\*0

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

*Ivan Staley*

Certificate # 9696  
06/08/95

01/24/1996 07:59 9104511809

OHM CAMP LEJEUNE

01/23/1996 15:32 4097384155

CHEMICAL WASTE MNGT

CHEMICAL WASTE MANAGEMENT  
Federal EPA ID: TXD00838896  
State EPA ID: 50212-001  
Highway 73  
PORT ARTHUR,, TX 77643  
(409) 736-2821

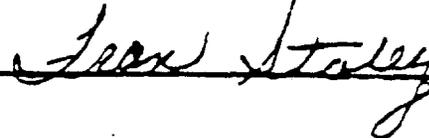
DRMO-CAMP LEJEUNE  
ATTN: MANIFEST SECTION  
NC6170022580  
US MARINE CORPS BASE  
CAMP LEJEUNE NC 28547

CERTIFICATE OF DESTRUCTION

Chemical Waste Management, Inc. has received waste material from DRMO-CAMP LEJEUNE on 05/31/95 as described on [state Manifest or Uniform] Hazardous Waste Manifest number 0000799071 sequence number 01. Chemical Waste Management, Inc., hereby certifies that the above described material was incinerated and thereby destroyed in accordance with the 40 CFR part 761 as it pertains to the incineration of Poly-Chlorinated Biphenyl contaminated materials.

Profile Number: AR4721  
CWM Tracking ID: 52201201  
Treatment Date: 05/31/95  
CWM Unit #: 1\*0

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

  
\_\_\_\_\_

Certificate # 9692  
06/08/95

CHEMICAL WASTE MANAGEMENT  
Federal EPA ID: TXDC00838896  
State EPA ID: 50212-001  
Highway 73  
PORT ARTHUR,, TX 77643  
(409) 736-2821

DRMO-CAMP LEJEUNE  
ATTN: MANIFEST SECTION  
NC6170022580  
US MARINE CORPS BASE  
CAMP LEJEUNE NC 28547

CERTIFICATE OF DESTRUCTION  
-----

Chemical Waste Management, Inc. has received waste material from DRMO-CAMP LEJEUNE on 05/14/95 as described on [State manifest or Uniform] Hazardous Waste Manifest number 0000799070 Sequence number 01. Chemical Waste Management, Inc., hereby certifies that the above described material was incinerated and thereby destroyed in accordance with the 40 CFR part 761 as it pertains to the incineration of Poly-Chlorinated Biphenyl contaminated materials.

Profile Number: AR4721  
CWM Tracking ID: 52201001  
Treatment Date: 05/30/95  
CWM Unit #: 1\*0

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

Iron Staley

Certificate # 9697  
06/08/95

01/24/1996 07:59 9104511809  
01/23/1996 15:32 4097364155

OHM CAMP LEJEUNE  
CHEMICAL WASTE MGT

CHEMICAL WASTE MANAGEMENT  
Federal EPA ID: TXD00838896  
State EPA ID: 50212-001  
Highway 73  
PORT ARTHUR,, TX 77643  
(409) 736-2821

DRMO-CAMP LEJEUNE  
ATTN: MANIFEST SECTION  
NC5170022580  
US MARINE CORPS BASE  
CAMP LEJEUNE NC 28547

CERTIFICATE OF DESTRUCTION

Chemical Waste Management, Inc. has received waste material from DRMO-CAMP LEJEUNE on 05/25/95 as described on [State Manifest or Uniform] Hazardous Waste Manifest number 0000/99069 Sequence Number 01. Chemical Waste Management, Inc., hereby certifies that the above described material was incinerated and thereby destroyed in accordance with the 40 CFR part 761 as it pertains to the incineration of Poly-Chlorinated Biphenyl contaminated materials.

Profile Number: AR4731  
CWM Tracking ID: 52202501  
Treatment Date: 06/01/95  
CWM Unit #: 1\*0

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

*Frank Staley*

Certificate # 9699  
06/09/95

CHEMICAL WASTE MANAGEMENT  
Federal EPA ID: TXD00838896  
State EPA ID: 50212-001  
Highway 73  
PORT ARTHUR,, TX 77643  
(409) 736-2621

DRMO-CAMP LEJEUNE  
ATTN: MANIFEST SECTION  
NC6170022580  
US MARINE CORPS BASE  
CAMP LEJEUNE NC 28547

CERTIFICATE OF DESTRUCTION  
-----

Chemical Waste Management, Inc. has received waste material from DRMO-CAMP LEJEUNE on 05/24/95 as described on [State Manifest or Uniform] Hazardous Waste Manifest number 0000799068 Sequence number 01. Chemical Waste Management, Inc., hereby certifies that the above described material was incinerated and thereby destroyed in accordance with the 40 CFR part 761 as it pertains to the incineration of Poly-Chlorinated Biphenyl contaminated materials.

Profile Number: AR4721  
CWM Tracking ID: 52201701  
Treatment Date: 06/13/95  
CWM Unit #: 1\*0

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

  
\_\_\_\_\_

Certificate # 9850  
06/16/95



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

RECEIVED  
JUN 10 1995

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 11086  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 5-31-95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

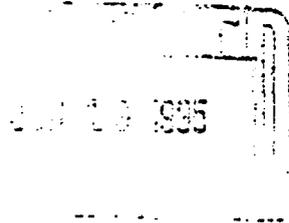
Midge Shelby  
General Manager

6/15/95  
Date



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029



U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 11087  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 5-29-95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

Michelle Shelby  
General Manager

6/15/95  
Date



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

RECEIVED  
JUN 19 1995

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 21088  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 6-4-95  
in accordance with operating permit number KYD088438817 parameters at Calvert City,  
Kentucky, and that such disposal method complies with all applicable Federal / State  
laws and regulations.

Midge Shelby  
General Manager

6/15/95  
Date



# L W D, I N C.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

JUN 10 1995

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 11089  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 6-4-95  
in accordance with operating permit number KYD088438817 parameters at Calvert City,  
Kentucky, and that such disposal method complies with all applicable Federal / State  
laws and regulations.

  
General Manager

6/15/95  
Date



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

RECEIVED  
JUN 19 1995

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01090  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 6-11-95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

Hilda Shelby  
General Manager

6/15/95  
Date



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

RECEIVED  
JUN 19 1995

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01091  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 6-5-95 in accordance with operating permit number KYD068436817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

Mike Shelby  
General Manager

6/15/95  
Date



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 57  
CAMP LEJEUNE, NC

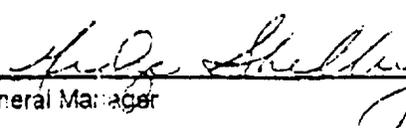
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01092  
Purchase Order No. N/A  
Billed on Invoice No. 9426

The TSD facility certifies that these wastes were incinerated on 06/11/96 in accordance with operating permit number KYD066436617 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

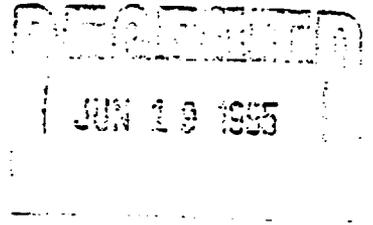
1/24/96  
Date

(4705)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029



U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01093  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 6-7-95  
in accordance with operating permit number KYD086436317 parameters at Calvert City,  
Kentucky, and that such disposal method complies with all applicable Federal / State  
laws and regulations.

Midge Shelby  
General Manager

6/15/95  
Date



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

JUN 13 1995

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01094  
Purchase Order No. N/A  
Billed on Invoice No. 9406

The TSD facility certifies that these wastes were incinerated on 6-3-95 in accordance with operating permit number KYD066436617 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

6/15/95  
Date



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 37  
CAMP LEJEUNE, NC

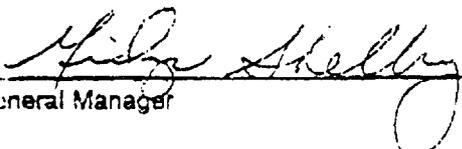
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. (hereinafter known as the TSD facility) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01097  
Purchase Order No. N/A  
Billed on Invoice No. 9867

The TSD facility certifies that these wastes were incinerated on 08/14/95 in accordance with operating permit number KYD088428817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4703)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

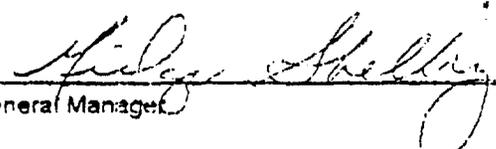
28540

LWD, INC  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01099  
Purchase Order No. N/A  
Billed on Invoice No. 9667

The TSD facility certifies that these wastes were incinerated on 06/14/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations

  
General Manager

1/24/96  
Date

(4705)



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING G7  
CAMP LEJEUNE, NC

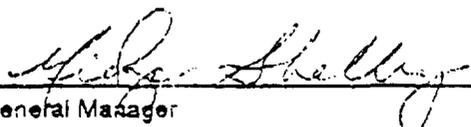
23540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01190  
Purchase Order No. N/A  
Billed on Invoice No. 9687

The TSD facility certifies that these wastes were incinerated on 06/15/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4705)



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

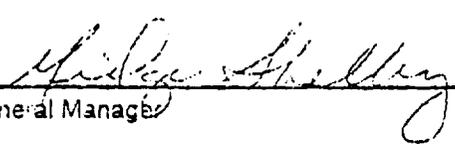
26540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. (hereinafter known as the TSD facility) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01101  
Purchase Order No. N/A  
Billed on invoice No. 9867

The TSD facility certifies that these wastes were incinerated on 06/11/96 in accordance with operating permit number KY0088438317 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4705)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01102  
Purchase Order No. N/A  
Billed on invoice No. 9867

The TSD facility certifies that these wastes were incinerated on 08/13/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

*Widger Shelby*      1/24/96  
General Manager      Date

(4736)



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

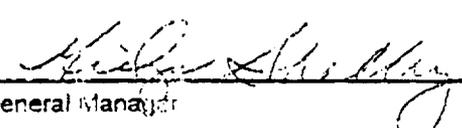
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. C11C5  
Purchase Order No. N/A  
Billed on Invoice No. 9733

The TSD facility certifies that these wastes were incinerated on 06/15/95 in accordance with operating permit number KY0088438817 parameters at Calvert City Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(1696)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

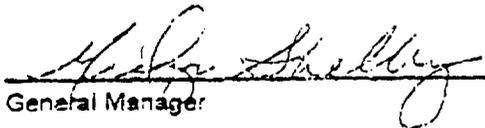
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. (hereinafter known as the TSD facility) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01106  
Purchase Order No. N/A  
Billed on Invoice No. 9733

The TSD facility certifies that these wastes were incinerated on 08/18/95 in accordance with operating permit number KY0083438617 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4896)



# L W D, I N C.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

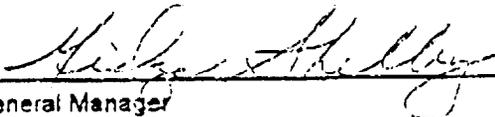
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01107  
Purchase Order No. N/A  
Billed on Invoice No. 8733

The TSD facility certifies that these wastes were incinerated on 06/16/95 in accordance with operating permit number KYD086438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(465-B)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

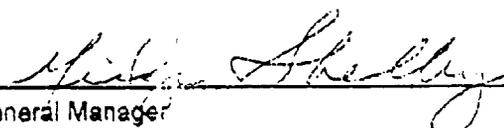
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. (hereinafter known as the TSD facility) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01108  
Purchase Order No. N/A  
Billed on invoice No. 15931

The TSD facility certifies that these wastes were incinerated on 06/17/95 in accordance with operating permit number KYDC88436817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4696)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

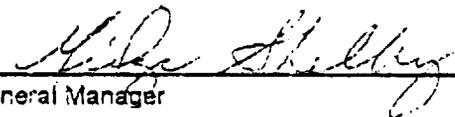
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. (hereinafter known as the TSD facility) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01109  
Purchase Order No. N/A  
Billed on Invoice No. 9733

The TSD facility certifies that these wastes were incinerated on 06/18/95 in accordance with operating permit number KYD083438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4693)



# L W D, I N C.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

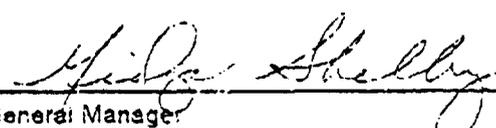
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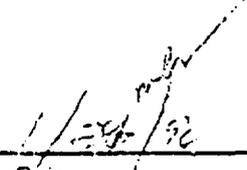
LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01114  
Purchase Order No. N/A  
Billed on Invoice No. 9369

The TSD facility certifies that these wastes were incinerated on 06/16/95  
in accordance with operating permit number KYD066438617 parameters at Calvert City,  
Kentucky, and that such disposal method complies with all applicable Federal / State  
laws and regulations.

  
General Manager

  
Date

(4898)



# L W D, INC.

P.O. BOX 327 • CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

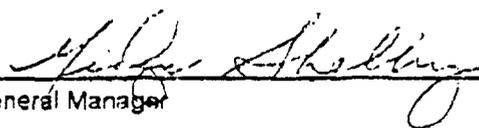
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01115  
Purchase Order No. N/A  
Billed on Invoice No. 9869

The TSD facility certifies that these wastes were incinerated on 06/15/95 in accordance with operating permit number KY0088433317 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

11/24/96  
Date

(4693)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01116  
Purchase Order No. N/A  
Billed on Invoice No. 9869

The TSD facility certifies that these wastes were incinerated on 06/15/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

General Manager

Date

(4896)



# L W D, I N C.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01117  
Purchase Order No. N/A  
Billed on Invoice No. 9869

The TSD facility certifies that these wastes were incinerated on 09/14/95 in accordance with operating permit number KY0088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4896)



# L W D, I N C.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01113  
Purchase Order No. N/A  
Billed on Invoice No. 9869

The TSD facility certifies that these wastes were incinerated on 08/16/95  
in accordance with operating permit number KYD038438817 parameters at Calvert City,  
Kentucky, and that such disposal method complies with all applicable Federal / State  
laws and regulations.

*Hilda Shelly*

*1/24/96*

General Manager

Date

(4696)



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 87  
CAMP LEJEUNE, NC

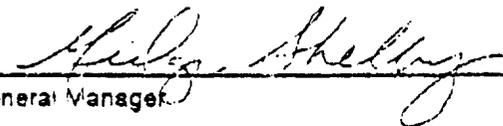
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01122  
Purchase Order No. N/A  
Billed on Invoice No. 10060

The TSD facility certifies that these wastes were incinerated on 06/18/95 in accordance with operating permit number KY0086438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
General Manager

1/24/96  
Date

(4398)



# L W D, I N C.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

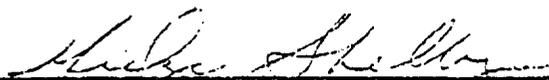
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LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01125  
Purchase Order No. N/A  
Billed on Invoice No. 10133

The TSD facility certifies that these wastes were incinerated on 07/08/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
\_\_\_\_\_  
General Manager

11/20/96  
\_\_\_\_\_  
Date

(4658)



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

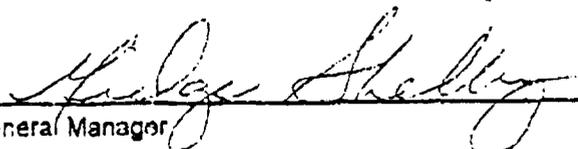
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01128  
Purchase Order No. N/A  
Billed on Invoice No. 10133

The TSD facility certifies that these wastes were incinerated on 06/24/95 in accordance with operating permit number KYD086438317 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
\_\_\_\_\_  
General Manager

1/24/96  
\_\_\_\_\_  
Date

(4696)



# L W D, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

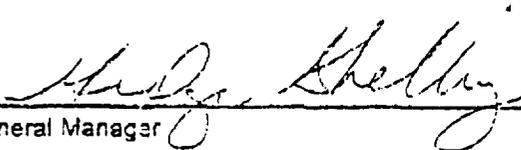
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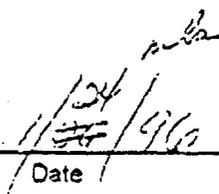
LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01127  
Purchase Order No. N/A  
Billed on Invoice No. 10133

The TSD facility certifies that these wastes were incinerated on 08/26/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
\_\_\_\_\_  
General Manager

  
\_\_\_\_\_  
Date

(4396)



# LWD, INC.

P.O. BOX 327 - CALVERT CITY, KENTUCKY 42029

U.S. MARINE CORPS  
BUILDING 67  
CAMP LEJEUNE, NC

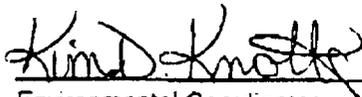
28540

LWD, INC.  
P.O. BOX 327  
CALVERT CITY, KENTUCKY 42029

This document certifies that LWD, Inc. ( hereinafter known as the TSD facility ) has serviced wastes sent to the TSD facility by

U.S. MARINE CORPS  
with Manifest No. 01155  
Purchase Order No. N/A  
Billed on Invoice No. 11770

The TSD facility certifies that these wastes were incinerated on 07/28/95 in accordance with operating permit number KYD088438817 parameters at Calvert City, Kentucky, and that such disposal method complies with all applicable Federal / State laws and regulations.

  
Environmental Coordinator

1/31/96  
Date

(4696)



**BROWNING-FERRIS INDUSTRIES**

Sampson County Landfill District

Recycled paper 

TO WHOM IT MAY CONCERN.

We accepted soil carrying manifests numbers: 883344 (11/21/95), 883346 (11/21/95), 883347 (11/21/95), 883343 (12/07/95), 883342 (12/07/95), 824528 (12/07/95), into our landfill from the United States Marine Corps, Camp LeJeune.

Regards,

A handwritten signature in cursive script that reads 'Shirley A. Robinson'.

Shirley A. Robinson  
Inside Sales Representative

**Appendix E**  
**QC Analytical Report**

## QC ANALYTICAL REPORT

Samples from AOC 2,3, & 4 were analyzed by PACE Laboratory, Inc. Samples from AOC 1 were analyzed by Analytical Services, Inc. All samples were analyzed within the required holding times. All initial and continuing calibration criteria were met. Method blanks were analyzed for each matrix and determined to be contaminant free.

The data was validated by Laboratory Data Consultants, Inc. Validation was performed under NEESA Level C guidelines. These reports are included in this Appendix E. The calculations for matrix spike/matrix spike duplicates, RPD, and % difference were within the QC limit. The % difference of calibration factors in continuing standard mixtures were within the 15% QC limit except for those listed in Table A. The associated data has been qualified as estimated (J) to account for this event. Table B is a cross-reference of Laboratory Data consultants review groups to the Sample Delivery Groups (SGD) from the laboratories.

<b>Table A - Qualified Data Summary</b>		
<b>OHM ID</b>	<b>4,4-DDT Conc.</b>	<b>4,4-DDD Conc.</b>
CLJ62-A3S-11.6BC		2100J
CLJ62-A3S-12.6BC		300J
CLJ62-A3S-13.6CS		1800J
CLJ62-A3S-16.6CS		1100J
CLJ62-A3S-16.6CSD		1400J
CLJ62-A3S-RB	BDL	
CLJ62-A2S-RB	BDL	
CLJ62-FB	BDL	
CLJ62-A3S-001CS	180 J	
CLJ62-A3S-003CS	31 J	
CLJ62-A3S-004CS	740 J	
CLJ62-A3S-001BC	220 J	
CLJ62-A3S-004BC	BDL	
CLJ62-A3S-003.2BCD	220 J	
CLJ62-A3S-003.2BC	140 J	
CLJ62-A3S-008.2SC	100 J	
FB	BDL	
RB	BDL	

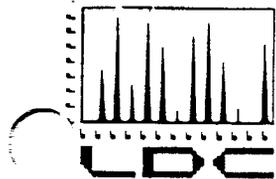
**Table B - LDC Cross Reference**

<b>LDC Group</b>	<b>SDG#</b>
Group #1579 (Samples received from PACE)	
1579A3	44280
1579B3	44328
1579C3	44360
1579D3	44393
1579E3	44479
1579F3	44544
1579G3	44626
Group #1729 (Samples received from Analytical Services, Inc.)	
1729A3	CLJ62-001

**Camp Lejeune  
Data Validation Reports  
LDC# 1579**

Chlorinated Pesticides/PCBs

**LDC**



**LABORATORY DATA CONSULTANTS, INC.**

7750 El Camino Real, Suite 2C, Carlsbad, CA 92009 Phone: 619/634-0437 Fax: 619/634-0439

Missy Art  
OHM Remediation Services Corp.  
5335 Triangle Parkway, Suite 450  
Norcross, GA 30092

September 26, 1995

SUBJECT: Camp Lejeune, Data Validation

Dear Ms. Art,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on August 22, 1995.

LDC Project # 1579:

<u>SDG #</u>	<u>Fraction</u>
44280, 44328, 44360, 44393, 44479, 44544, 44626	Chlorinated Pesticides/PCBs

The data validation was performed under NEESA Level C guidelines. The analyses were validated using the following documents, as applicable to each method:

- NEESA document 20.2-047B, Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program, June 1988.
- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, February 1994
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, November 1986; Revision 1, July 1992; Revision 2, November 1992; and update 1, August 1993

Please feel free to contact us if you have any questions.

Sincerely,

Richard M. Amano  
President/Principal Chemist



**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** May 30, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG):** 44280

**Sample Identification**

CLJ62-A3S-001-CS  
CLJ62-A3S-002-CS  
CLJ62-A3S-003-CS  
CLJ62-A3S-004-CS  
CLJ62-A3S-006-CS  
CLJ62-A3S-007-CS  
CLJ62-A3S-009-CS  
CLJ62-A3S-001-BC  
CLJ62-A3S-002-BC  
CLJ62-A3S-004-BC  
CLJ62-A3S-006-BC  
CLJ62-A3S-006-BCDUP  
CLJ62-RB  
CLJ62-FB  
CLJ62-A3S-001-CSMS  
CLJ62-A3S-001-CSMSD

## Introduction

This data review covers 14 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient (r) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits with the following exceptions:

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB	112/110	Heptachlor	17.7	CLW62-A3S-009-CS CLW62-A3S-001-BC CLW62-A3S-002-BC CLW62-A3S-004-BC CLW62-A3S-006-BC CLW62-A3S-006-BCDUP CLW62-RB CLW62-FB	J	P
IND2AB	112/110	4,4'-DDT	22.4	CLW62-A3S-001-CS CLW62-A3S-003-CS CLW62-A3S-004-CS CLW62-A3S-001-BC CLW62-A3S-004-BC	J	P

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

## VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44280.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chlorendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria.

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were analyzed according to the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All soil samples in SDG 44280.	All TCL compounds	MS/MSD was spiked with 4,4'-DDE, 4,4'-DDD, and 4,4'-DDT.	MS/MSD should be spiked with Gamma-BHC, Heptachlor, Aldrin, Dieldrin, Endrin and 4,4'-DDT.	None	P

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44280.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
LS-P4320	Endosulfan I	40 (41.20-98.53)	CLJ62-RB CLJ62-FB B-P4320 BLK	J	A

### IX. Regional Quality Assurance and Quality Control

Not applicable.

### X. Pesticide Cleanup Checks

#### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

#### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

### XI. Target Compound Identification

Raw data were not checked for this SDG.

### XII. Compound Quantitation and Reported CRQLs

Raw data were not checked for this SDG.

### XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

### XIV. Field Duplicates

Samples CLJ62-A3S-006-BC and CLJ62-A3S-006-BCDUP were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-006-BC	CLJ62-A3S-006-BCDUP	
Alpha-chlordane	9.9	8.9	11
Gamma-chlordane	10	9.0	11

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-006-BC	CLJ62-A3S-006-BCDUP	
4,4'-DDT	9.0	ND	Not calculable
4,4'-DDE	4.2	3.9	7

#### XV. Field Blanks

Sample CLJ62-RB was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in the rinsate.

Sample CLJ62-FB was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44280**

SDG	Sample	Compound	Flag	A or P	Reason
44280	CLJ62-A3S-009-CS CLJ62-A3S-001-BC CLJ62-A3S-002-BC CLJ62-A3S-004-BC CLJ62-A3S-006-BC CLJ62-A3S-006-BCDUP CLJ62-RB CLJ62-FB	Heptachlor	J	P	Continuing calibration (%D)
44280	CLJ62-A3S-001-CS CLJ62-A3S-003-CS CLJ62-A3S-004-CS CLJ62-A3S-001-BC CLJ62-A3S-004-BC	4,4'-DDT	J	P	Continuing calibration (%D)
44280	CLJ62-A3S-001-CS CLJ62-A3S-002-CS CLJ62-A3S-003-CS CLJ62-A3S-004-CS CLJ62-A3S-006-CS CLJ62-A3S-007-CS CLJ62-A3S-009-CS CLJ62-A3S-001-BC CLJ62-A3S-002-BC CLJ62-A3S-004-BC CLJ62-A3S-006-BC CLJ62-A3S-006-BCDUP CLJ62-RB CLJ62-FB	All TCL compounds	None	P	Surrogate spikes
44280	CLJ62-A3S-001-CS CLJ62-A3S-002-CS CLJ62-A3S-003-CS CLJ62-A3S-004-CS CLJ62-A3S-006-CS CLJ62-A3S-007-CS CLJ62-A3S-009-CS CLJ62-A3S-001-BC CLJ62-A3S-002-BC CLJ62-A3S-004-BC CLJ62-A3S-006-BC CLJ62-A3S-006-BCDUP CLJ62-RB CLJ62-FB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates
44280	CLJ62-RB CLJ62-FB	Endosulfan I	J	A	Laboratory control samples (%R)

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44280**

No Laboratory Blank Data Qualified in this SDG.

1579A

Laboratory number: 44280-001  
 Sample Designation: CLJ62-A3S-001-CS  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	40
alpha-BHC	BDL	40
beta-BHC	BDL	40
gamma-BHC (Lindane)	BDL	40
delta-BHC	BDL	40
alpha-Chlordane	140	40
gamma-Chlordane	160	40
4,4'-DDT	180	80 J
4,4'-DDE	130	40
4,4'-DDD	330	80
Dieldrin	BDL	40
Endosulfan I	BDL	40
Endosulfan II	BDL	80
Endosulfan sulfate	BDL	80
Endrin	BDL	40
Endrin aldehyde	BDL	80
Heptachlor	BDL	40 X
Heptachlor Epoxide	BDL	40
PCB-1242 (Arochlor 1242)	BDL	400
PCB-1254 (Arochlor 1254)	BDL	400
PCB-1221 (Arochlor 1221)	BDL	400
PCB-1232 (Arochlor 1232)	BDL	400
PCB-1248 (Arochlor 1248)	BDL	400
PCB-1260 (Arochlor 1260)	BDL	400
PCB-1016 (Arochlor 1016)	BDL	400
Toxaphene	BDL	2000
Endrin Ketone	BDL	80
Methoxychlor	BDL	400

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 AT

Laboratory number: 44280-002  
Sample Designation: CLJ62-A3S-002-CS  
Date Extracted: 06/06/95  
Date Analyzed: 06/07/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 15 % , elevating the reporting limits  
by a factor of 1.17 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	200
alpha-BHC	BDL	200
beta-BHC	BDL	200
gamma-BHC (Lindane)	BDL	200
delta-BHC	BDL	200
alpha-Chlordane	BDL	200
gamma-Chlordane	BDL	200
4,4'-DDT	220 J	400
4,4'-DDE	170 J	200
4,4'-DDD	2500	400
Dieldrin	BDL	200
Endosulfan I	BDL	200
Endosulfan II	BDL	400
Endosulfan sulfate	BDL	400
Endrin	BDL	200
Endrin aldehyde	BDL	400
Heptachlor	BDL	200
Heptachlor Epoxide	BDL	200
PCB-1242 (Arochlor 1242)	BDL	2000
PCB-1254 (Arochlor 1254)	BDL	2000
PCB-1221 (Arochlor 1221)	BDL	2000
PCB-1232 (Arochlor 1232)	BDL	2000
PCB-1248 (Arochlor 1248)	BDL	2000
PCB-1260 (Arochlor 1260)	BDL	2000
PCB-1016 (Arochlor 1016)	BDL	2000
Toxaphene	BDL	8000
Endrin Ketone	BDL	400
Methoxychlor	BDL	2000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
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0000006

Laboratory number: 44280-003  
 Sample Designation: CLJ62-A3S-003-CS  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 16 % , elevating the reporting limits  
 by a factor of 1.2 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)		REPORTING LIMIT (ug/Kg)
Aldrin	BDL		20
alpha-BHC	BDL		20
beta-BHC	BDL		20
gamma-BHC (Lindane)	BDL		20
delta-BHC	BDL		20
alpha-Chlordane	9.7	J	20
gamma-Chlordane	BDL		20
4,4'-DDT	31	J	40 J
4,4'-DDE	36		20
4,4'-DDD	280		40
Dieldrin	BDL		20
Endosulfan I	BDL		20
Endosulfan II	BDL		40
Endosulfan sulfate	BDL		40
Endrin	BDL		20
Endrin aldehyde	BDL		40
Heptachlor	BDL		20
Heptachlor Epoxide	BDL		20
PCB-1242 (Arochlor 1242)	BDL		200
PCB-1254 (Arochlor 1254)	BDL		200
PCB-1221 (Arochlor 1221)	BDL		200
PCB-1232 (Arochlor 1232)	BDL		200
PCB-1248 (Arochlor 1248)	BDL		200
PCB-1260 (Arochlor 1260)	BDL		200
PCB-1016 (Arochlor 1016)	BDL		200
Toxaphene	BDL		800
Endrin Ketone	BDL		40
Methoxychlor	BDL		200

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
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Laboratory number: 44280-004  
 Sample Designation: CLJ62-A3S-004-CS  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 11 % , elevating the reporting limits  
 by a factor of 1.13 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	90
alpha-BHC	BDL	90
beta-BHC	BDL	90
gamma-BHC (Lindane)	BDL	90
delta-BHC	BDL	90
alpha-Chlordane	BDL	90
gamma-Chlordane	BDL	90
4,4'-DDT	740	200 J
4,4'-DDE	530	90
4,4'-DDD	1500	200
Dieldrin	BDL	90
Endosulfan I	BDL	90
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	90
Endrin aldehyde	BDL	200
Heptachlor	BDL	90
Heptachlor Epoxide	BDL	90
PCB-1242 (Arochlor 1242)	BDL	900
PCB-1254 (Arochlor 1254)	BDL	900
PCB-1221 (Arochlor 1221)	BDL	900
PCB-1232 (Arochlor 1232)	BDL	900
PCB-1248 (Arochlor 1248)	BDL	900
PCB-1260 (Arochlor 1260)	BDL	900
PCB-1016 (Arochlor 1016)	BDL	900
Toxaphene	BDL	4000
Endrin Ketone	BDL	200
Methoxychlor	BDL	900

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
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Laboratory number: 44280-005  
 Sample Designation: CLJ62-A3S-006-CS  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/07/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 16 % , elevating the reporting limits  
 by a factor of 1.2 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)		REPORTING LIMIT (ug/Kg)
Aldrin	BDL		4
alpha-BHC	BDL		4
beta-BHC	BDL		4
gamma-BHC (Lindane)	BDL		4
delta-BHC	BDL		4
alpha-Chlordane	2.9	J	4
gamma-Chlordane	2.5	J	4
4,4'-DDT	BDL		8
4,4'-DDE	7.9		4
4,4'-DDD	79		8
Dieldrin	BDL		4
Endosulfan I	BDL		4
Endosulfan II	BDL		8
Endosulfan sulfate	BDL		8
Endrin	BDL		4
Endrin aldehyde	BDL		8
Heptachlor	BDL		4
Heptachlor Epoxide	BDL		4
PCB-1242 (Arochlor 1242)	BDL		40
PCB-1254 (Arochlor 1254)	BDL		40
PCB-1221 (Arochlor 1221)	BDL		40
PCB-1232 (Arochlor 1232)	BDL		40
PCB-1248 (Arochlor 1248)	BDL		40
PCB-1260 (Arochlor 1260)	BDL		40
PCB-1016 (Arochlor 1016)	BDL		40
Toxaphene	BDL		200
Endrin Ketone	BDL		8
Methoxychlor	BDL		40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

9/22/95  
 MS

Laboratory number: 44280-006  
 Sample Designation: CLJ62-A3S-007-CS  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/07/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 15 % , elevating the reporting limits  
 by a factor of 1.17 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	8
alpha-BHC	BDL	8
beta-BHC	BDL	8
gamma-BHC (Lindane)	BDL	8
delta-BHC	BDL	8
alpha-Chlordane	32	8
gamma-Chlordane	37	8
4,4'-DDT	130	20
4,4'-DDE	25	8
4,4'-DDD	BDL	20
Dieldrin	BDL	8
Endosulfan I	BDL	8
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	8
Endrin aldehyde	BDL	20
Heptachlor	BDL	8
Heptachlor Epoxide	BDL	8
PCB-1242 (Arochlor 1242)	BDL	80
PCB-1254 (Arochlor 1254)	BDL	80
PCB-1221 (Arochlor 1221)	BDL	80
PCB-1232 (Arochlor 1232)	BDL	80
PCB-1248 (Arochlor 1248)	BDL	80
PCB-1260 (Arochlor 1260)	BDL	80
PCB-1016 (Arochlor 1016)	BDL	80
Toxaphene	BDL	300
Endrin Ketone	BDL	20
Methoxychlor	BDL	80

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 A

Laboratory number: 44280-007  
 Sample Designation: CLJ62-A3S-009-CS  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)		REPORTING LIMIT (ug/Kg)
Aldrin	BDL		4
alpha-BHC	BDL		4
beta-BHC	BDL		4
gamma-BHC (Lindane)	BDL		4
delta-BHC	BDL		4
alpha-Chlordane	3.5	J	4
gamma-Chlordane	3.3	J	4
4,4'-DDT	23		8
4,4'-DDE	10		4
4,4'-DDD	15		8
Dieldrin	BDL		4
Endosulfan I	BDL		4
Endosulfan II	BDL		8
Endosulfan sulfate	BDL		8
Endrin	BDL		4
Endrin aldehyde	BDL		8
Heptachlor	BDL		4 J
Heptachlor Epoxide	BDL		4
PCB-1242 (Arochlor 1242)	BDL		40
PCB-1254 (Arochlor 1254)	BDL		40
PCB-1221 (Arochlor 1221)	BDL		40
PCB-1232 (Arochlor 1232)	BDL		40
PCB-1248 (Arochlor 1248)	BDL		40
PCB-1260 (Arochlor 1260)	BDL		40
PCB-1016 (Arochlor 1016)	BDL		40
Toxaphene	BDL		200
Endrin Ketone	BDL		8
Methoxychlor	BDL		40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

9/22/95  
 Ki

Laboratory number: 44280-008  
 Sample Designation: CLJ62-A3S-001-BC  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 15 % , elevating the reporting limits  
 by a factor of 1.18 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	20
alpha-BHC	BDL	20
beta-BHC	BDL	20
gamma-BHC (Lindane)	BDL	20
delta-BHC	BDL	20
alpha-Chlordane	24	20
gamma-Chlordane	28	20
4,4'-DDT	220	40 J
4,4'-DDE	40	20
4,4'-DDD	30	40 J
Dieldrin	23	20
Endosulfan I	BDL	20
Endosulfan II	BDL	40
Endosulfan sulfate	BDL	40
Endrin	BDL	20
Endrin aldehyde	BDL	40
Heptachlor	BDL	20 J
Heptachlor Epoxide	BDL	20
PCB-1242 (Arochlor 1242)	BDL	200
PCB-1254 (Arochlor 1254)	BDL	200
PCB-1221 (Arochlor 1221)	BDL	200
PCB-1232 (Arochlor 1232)	BDL	200
PCB-1248 (Arochlor 1248)	BDL	200
PCB-1260 (Arochlor 1260)	BDL	200
PCB-1016 (Arochlor 1016)	BDL	200
Toxaphene	BDL	800
Endrin Ketone	BDL	40
Methoxychlor	BDL	200

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 M

Laboratory number: 44280-009  
 Sample Designation: CLJ62-A3S-002-BC  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 6 % , elevating the reporting limits  
 by a factor of 1.07 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	20
alpha-BHC	BDL	20
beta-BHC	BDL	20
gamma-BHC (Lindane)	BDL	20
delta-BHC	BDL	20
alpha-Chlordane	14	J 20
gamma-Chlordane	16	J 20
4,4'-DDT	32	J 40
4,4'-DDE	48	20
4,4'-DDD	200	40
Dieldrin	BDL	20
Endosulfan I	BDL	20
Endosulfan II	BDL	40
Endosulfan sulfate	BDL	40
Endrin	BDL	20
Endrin aldehyde	BDL	40
Heptachlor	BDL	20 J
Heptachlor Epoxide	BDL	20
PCB-1242 (Arochlor 1242)	BDL	200
PCB-1254 (Arochlor 1254)	BDL	200
PCB-1221 (Arochlor 1221)	BDL	200
PCB-1232 (Arochlor 1232)	BDL	200
PCB-1248 (Arochlor 1248)	BDL	200
PCB-1260 (Arochlor 1260)	BDL	200
PCB-1016 (Arochlor 1016)	BDL	200
Toxaphene	BDL	700
Endrin Ketone	BDL	40
Methoxychlor	BDL	200

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 M



Laboratory number: 44280-010  
 Sample Designation: CLJ62-A3S-004-BC  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 12 % , elevating the reporting limits  
 by a factor of 1.13 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)		REPORTING LIMIT (ug/Kg)
Aldrin	BDL		400
alpha-BHC	BDL		400
beta-BHC	BDL		400
gamma-BHC (Lindane)	BDL		400
delta-BHC	BDL		400
alpha-Chlordane	210	J	400
gamma-Chlordane	190	J	400
4,4'-DDT	BDL		700 J
4,4'-DDE	370	J	400
4,4'-DDD	6700		700
Dieldrin	BDL		400
Endosulfan I	BDL		400
Endosulfan II	BDL		700
Endosulfan sulfate	BDL		700
Endrin	BDL		400
Endrin aldehyde	BDL		700
Heptachlor	BDL		400 J
Heptachlor Epoxide	BDL		400
PCB-1242 (Arochlor 1242)	BDL		4000
PCB-1254 (Arochlor 1254)	BDL		4000
PCB-1221 (Arochlor 1221)	BDL		4000
PCB-1232 (Arochlor 1232)	BDL		4000
PCB-1248 (Arochlor 1248)	BDL		4000
PCB-1260 (Arochlor 1260)	BDL		4000
PCB-1016 (Arochlor 1016)	BDL		4000
Toxaphene	BDL		10000
Endrin Ketone	BDL		700
Methoxychlor	BDL		4000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit.

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
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Laboratory number: 44280-011  
 Sample Designation: CLJ62-A3S-006-BC  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 18 % , elevating the reporting limits  
 by a factor of 1.22 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	4
alpha-BHC	BDL	4
beta-BHC	BDL	4
gamma-BHC (Lindane)	BDL	4
delta-BHC	BDL	4
alpha-Chlordane	9.9	4
gamma-Chlordane	10	4
4,4'-DDT	9.0	8
4,4'-DDE	4.2	4
4,4'-DDD	BDL	8
Dieldrin	BDL	4
Endosulfan I	BDL	4
Endosulfan II	BDL	8
Endosulfan sulfate	BDL	8
Endrin	BDL	4
Endrin aldehyde	BDL	8
Heptachlor	BDL	4 J
Heptachlor Epoxide	BDL	4
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40
Toxaphene	BDL	200
Endrin Ketone	BDL	8
Methoxychlor	BDL	40.

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
 M

Laboratory number: 44280-012  
 Sample Designation: CLJ62-A3S-006-BCDUP  
 Date Extracted: 06/06/95  
 Date Analyzed: 06/08/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 19 % , elevating the reporting limits  
 by a factor of 1.24 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	4
alpha-BHC	BDL	4
beta-BHC	BDL	4
gamma-BHC (Lindane)	BDL	4
delta-BHC	BDL	4
alpha-Chlordane	8.9	4
gamma-Chlordane	9.0	4
4,4'-DDT	BDL	8
4,4'-DDE	3.9	J 4
4,4'-DDD	BDL	8
Dieldrin	BDL	4
Endosulfan I	BDL	4
Endosulfan II	BDL	8
Endosulfan sulfate	BDL	8
Endrin	BDL	4
Endrin aldehyde	BDL	8
Heptachlor	BDL	4 J
Heptachlor Epoxide	BDL	4
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40
Toxaphene	BDL	200
Endrin Ketone	BDL	8
Methoxychlor	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

9/22/95  
 H

Laboratory number: 44280-013  
Sample Designation: CLLJ62-RB  
Date Extracted: 06/06/95  
Date Analyzed: 06/08/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05 J
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05 J
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 8080  
EPA SW846, 3rd Edition

BDL = Below reporting limit

9/22/95  
H

Laboratory number: 44280-014  
Sample Designation: CLLJ62-FB  
Date Extracted: 06/06/95  
Date Analyzed: 06/08/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05 J
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05 J
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608  
EPA SW846, 3rd Edition

BDL = Below reporting limit

LDC #: 1579A3 **VALIDATION COMPLETENESS WORKSHEET**  
 SDG #: 44280      EPA Level III   X   NEESA Level C  
 Laboratory: Pace, Inc.

Date: 8-31-95  
 Page: 1 of 1  
 Reviewer:     
 2nd Reviewer:   

**METHOD:** GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 5-30-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	$r \geq 0.995$
IV.	Continuing calibration	SW	20
V.	Blanks	A	blanks
VI.	Surrogate spikes	SW A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D <sub>i</sub> = 11, 12
XV.	Field blanks	ND	R = 13 FB = 14

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinsate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

Validated Samples:

1	CLJ62-A3S-001-CS	SOIL	11 D <sub>i</sub>	CLJ62-A3S-006-BC	SOIL	21
2	CLJ62-A3S-002-CS		12 D <sub>i</sub>	CLJ62-A3S-006-BCDUP	↓	22
3	CLJ62-A3S-003-CS		13 R	CLJ62-RB	AQ	23
4	CLJ62-A3S-004-CS		14 FB	CLJ62-FB	↓	24
5	CLJ62-A3S-006-CS		15	CLJ62-A3S-001-CSMS	SOIL	25
6	CLJ62-A3S-007-CS		16	CLJ62-A3S-001-CSMSD	↓	26
7	CLJ62-A3S-009-CS		17	B-P4322 BIK	↓	27
8	CLJ62-A3S-001-BC		18	B-P4322 SCL BIK	↓	28
9	CLJ62-A3S-002-BC		19	B-P4320 BIK	AQ	29
0	CLJ62-A3S-004-BC	↓	20			30





LDC #: 1574A3  
 SDG #: 80

**VALIDATION FINISHING WORKSHEET**  
**Matrix Spike/Matrix Spike Duplicates**

1 of 1  
 Reviewer: MM  
 2nd Reviewer: (S)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?

Level IV/D Only

- Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-8-95	15/16	ALL	MS/MSD SPIKED ( WITH )	( )	( )	All Soil Samples	None No Qual. <sup>7/18/95</sup>
				4,4'-DDE, 4,4'-DDD ( 4,4'-DDT	( )	( )		NONE/P
				INSTEAD OF ) A-FI LISTED BELOW	( )	( )		
				( )	( )	( )		
2	6-8-95	15/16	ALL	%R ( 2 RPD )	ALL ( OUT OF )	( )	All Soil Samples	NO QUAL
				QC ( LIMIT VUE TO SAMPLE )	( )	( )		
				CONC. ( 72X SPIKE AMT AND	( )	( )		
				DILUTION )	( )	( )		
3	6-8-95	No AQ MS/MSD	ALL	( )	( )	( )	ALL AQ SAMPLES	NO QUAL <sup>7/18/95</sup>
				( )	( )	( )		NONE/P
				( )	( )	( )		
				( )	( )	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	46-127	≤ 50	56-123	≤ 15
B	Heptachlor	35-130	≤ 31	40-131	≤ 20
C	Aldrin	34-132	≤ 43	40-120	≤ 22
D	Dieldrin	31-134	≤ 38	52-126	≤ 18
E	Endrin	42-134	≤ 45	56-121	≤ 21
F	4,4'-DDT	23-134	≤ 50	38-127	≤ 27
G					
H					
I					
J					

LDC # 193  
 SDG #: 4, 2, 8, 0

VALIDATION FINISHING WORKSHEET  
Laboratory Control Samples

Page 1 of 1  
 Reviewer: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a laboratory control samples (LCS) and laboratory control sample duplicate (LCSD) analyzed for each matrix in this SDG? \_\_\_\_\_

Y (N) N/A Were the LCS percent recoveries (%R) and relative percent differences (RPD) within the QC limits stated below?

Level IV/D Only

Y N N/A Was a LCS analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-7-95	LCS-P4320	G	40 (41.20-98.53)	( )	( )	13, 14, 19	J/A
		(AQ)		( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC				
B	Heptachlor				
C	Aldrin				
D	Dieldrin				
E	Endrin				
F	4,4'-DDT				
G	Endosulfan I			41.20-98.53	± 30
H					
I					
J					

LDC #: 1579A3  
 SDG #: 44280

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 1 of 1  
 Reviewer: DN  
 2nd reviewer: (S)

HOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

- Y  N  N/A Were field duplicate pairs identified in this SDG?  
 Y  N  N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration ( <u>µg/kg</u> )		RPD
	11	12	
<i>α-Chlordane</i>	9.9	8.9	11
<i>γ-Chlordane</i>	10	9.0	11
<i>4,4'-DDE</i>	9.0	ND	NC
<i>4,4'-DDE</i>	4.2	3.9	7

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** June 7, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG):** 44328

**Sample Identification**

CLJ62-A4S-001-BC	CLJ62-A2-RB
CLJ62-A4S-001-CS	CLJ62-FB
CLJ62-A4S-001-CSD	CLJ62-A2S-002-CSDMS
CLJ62-A3S-011-CS	CLJ62-A2S-002-CSDMSD
CLJ62-A2S-002-CS*	CLJ62-A2S-002-CSREDL**
CLJ62-A2S-002-CSRE*	CLJ62-A2S-002-CSDREDL**
CLJ62-A2S-002-CSDL**	
CLJ62-A2S-002-CSD*	
CLJ62-A2S-002-CSDRE*	
CLJ62-A2S-002-CSDDL**	
CLJ62-A3S-015-CS	
CLJ62-A3S-014-BC	
CLJ62-A3S-014-CS	
CLJ62-A3S-014-CSRE**	
CLJ62-A3S-015-BC	
CLJ62-A3S-015-BCD	
CLJ62-A3S-013-BCD	
CLJ62-A3S-012-CS	
CLJ62-A3-RB	
CLJ62-A4-RB	

\* Indicates PCBs only

\*\* Indicates Pesticides only

## Introduction

This data review covers 22 soil samples and 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient (r) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits with the following exceptions:

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8600	112/110	Gamma-BHC	16.4	CLJ62-A4S-001-CS CLJ62-A4S-001-CSD	J	P
IND2AB P8675	112/110	Heptachlor	15.4	CLJ62-A3S-012-CS CLJ62-A3-RB CLJ62-A4-RB CLJ62-A2-RB CLJ62-FB	J	P
IND2AB P8675	112/110	Endrin	20.4	CLJ62-A2S-002-CSDL** CLJ62-A2S-002-CSDDL** CLJ62-A3S-015-CS CLJ62-A3S-014-CS CLJ62-A3S-012-CS CLJ62-A2S-002-CSDMS CLJ62-A2S-002-CSDMSD	J	P

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8675	112/110	Endrin	20.7	CLJ62-A2S-002-CSDL** CLJ62-A2S-002-CSDDL** CLJ62-A3S-015-CS CLJ62-A3S-014-CS CLJ62-A3S-012-CS CLJ62-A2S-002-CSDMS CLJ62-A2S-002-CSDMSD	J	P

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

#### V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

#### VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44328.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chlorendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria.

#### VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44328.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

### VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria.

### IX. Regional Quality Assurance and Quality Control

Not applicable.

### X. Pesticide Cleanup Checks

#### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

#### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

### XI. Target Compound Identification

Raw data were not checked for this SDG.

### XII. Compound Quantitation and Reported CRQLs

Raw data were not checked for this SDG.

### XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

### XIV. Field Duplicates

Samples CLJ62-A4S-001-CS and CLJ62-A4S-001-CSD, samples CLJ62-A2S-002-CS\* and CLJ62-A2S-002-CSD\*, samples CLJ62-A3S-015-BC and CLJ62-A3S-015-BGD, samples CLJ62-A2S-002-CSDL\*\* and CLJ62-A2S-002-CSDDL\*\*, samples CLJ62-A2S-002-CSRE\* and CLJ62-A2S-002-CSDRE\*, and samples CLJ62-A2S-002-CSREDL\*\* and CLJ62-A2S-002-CSDREDL\*\* were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A4S-001-CS	CLJ62-A4S-001-CSD	
4,4'-DDT	11	33	100
4,4'-DDE	18	48	91

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A2S-002-CS*	CLJ62-A2S-002-CSD*	
Aroclor 1260	510	1200	81

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A2S-002-CSDL**	CLJ62-A2S-002-CSDDL**	
Alpha-chlordane	260	ND	Not calculable
Gamma-chlordane	220	ND	Not calculable
4,4'-DDT	1600	61000	190
4,4'-DDE	450	2600	141
4,4'-DDD	6000	13000	74

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A2S-002-CSRE*	CLJ62-A2S-002-CSDRE*	
Aroclor 1260	400	3200	156

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A2S-002-CSREDL**	CLJ62-A2S-002-CSDREDL**	
Alpha-chlordane	280	ND	Not calculable
Gamma-chlordane	240	ND	Not calculable
4,4'-DDT	3000	170000	193
4,4'-DDE	520	5600	166
4,4'-DDD	4300	21000	132

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-015-BC	CLJ62-A3S-015-BCD	
4,4'-DDT	1000	390	88

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-015-BC	CLJ62-A3S-015-BCD	
4,4'-DDE	ND	45	Not calculable
4,4'-DDD	950	690	32

#### XV. Field Blanks

Samples CLJ62-A3-RB, CLJ62-A4-RB, and CLJ62-A2-RB were identified as rinsates. No chlorinated pesticide or PCB contaminants were found in the rinsates.

Sample CLJ62-FB was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44328**

SDG	Sample	Compound	Flag	A or P	Reason
44328	CLJ62-A4S-001-CS CLJ62-A4S-001-CSD	Gamma-BHC	J	P	Continuing calibration (%D)
44328	CLJ62-A3S-012-CS CLJ62-A3-RB CLJ62-A4-RB CLJ62-A2-RB CLJ62-FB	Heptachlor	J	P	Continuing calibration (%D)
44328	CLJ62-A2S-002-CSDL** CLJ62-A2S-002-CSDDL** CLJ62-A3S-015-CS CLJ62-A3S-014-CS CLJ62-A3S-012-CS	Endrin	J	P	Continuing calibration (%D)
44328	CLJ62-A4S-001-BC CLJ62-A4S-001-CS CLJ62-A4S-001-CSD CLJ62-A3S-011-CS CLJ62-A2S-002-CS* CLJ62-A2S-002-CSRE* CLJ62-A2S-002-CSDL** CLJ62-A2S-002-CSD* CLJ62-A2S-002-CSDRE* CLJ62-A2S-002-CSDDL** CLJ62-A3S-015-CS CLJ62-A3S-014-BC CLJ62-A3S-014-CS CLJ62-A3S-014-CSRE** CLJ62-A3S-015-BC CLJ62-A3S-015-BCD CLJ62-A3S-013-BCD CLJ62-A3S-012-CS CLJ62-A3-RB CLJ62-A4-RB CLJ62-A2-RB CLJ62-FB CLJ62-A2S-002-CSREDL CLJ62-A2S-002-CSDREDL	All TCL compounds	None	P	Surrogate spikes
44328	CLJ62-A3-RB CLJ62-A4-RB CLJ62-A2-RB CLJ62-FB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44328**

No Laboratory Blank Data Qualified in this SDG.

1579B

Laboratory number: 44328-001  
Sample Designation: CLJ62-A4S-001-BC  
Date Extracted: 06/09/95  
Date Analyzed: 06/09/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 19 % , elevating the reporting limits  
by a factor of 1.23 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
PH



Laboratory number: 44328-001DL  
 Sample Designation: CLJ62-A4S-001-BC  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/12/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 19 % , elevating the reporting limits  
 by a factor of 1.23 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	80
alpha-BHC	BDL	80
beta-BHC	BDL	80
gamma-BHC (Lindane)	BDL	80
delta-BHC	BDL	80
alpha-Chlordane	BDL	80
gamma-Chlordane	BDL	80
4,4'-DDT	1300	200
4,4'-DDE	950	80
4,4'-DDD	140 J	200
Dieldrin	360	80
Endosulfan I	BDL	80
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	80
Endrin aldehyde	BDL	200
Heptachlor	BDL	80
Heptachlor Epoxide	BDL	80
Toxaphene	BDL	3000
Endrin Ketone	BDL	200
Methoxychlor	BDL	800

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 #3



Laboratory number: 44328-002  
 Sample Designation: CLJ62-A4S-001-CS  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/09/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 12 % , elevating the reporting limits  
 by a factor of 1.13 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	4
alpha-BHC	BDL	4
beta-BHC	BDL	4
gamma-BHC (Lindane)	BDL	4 J /
delta-BHC	BDL	4
alpha-Chlordane	BDL	4
gamma-Chlordane	BDL	4
4,4'-DDT	11	7
4,4'-DDE	18	4
4,4'-DDD	BDL	7
Dieldrin	BDL	4
Endosulfan I	BDL	4
Endosulfan II	BDL	7
Endosulfan sulfate	BDL	7
Endrin	BDL	4
Endrin aldehyde	BDL	7
Heptachlor	BDL	4
Heptachlor Epoxide	BDL	4
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40
Toxaphene	BDL	100
Endrin Ketone	BDL	7
Methoxychlor	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
 PR  
**pace**  
 INCORPORATED  
 THE ASSURANCE OF QUALITY

0000009

Laboratory number: 44328-003  
 Sample Designation: CLJ62-A4S-001-CSD  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/09/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 10 % , elevating the reporting limits  
 by a factor of 1.11 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	4
alpha-BHC	BDL	4
beta-BHC	BDL	4
gamma-BHC (Lindane)	BDL	4 J
delta-BHC	BDL	4
alpha-Chlordane	BDL	4
gamma-Chlordane	BDL	4
4,4'-DDT	33	7
4,4'-DDE	48	4
4,4'-DDD	BDL	7
Dieldrin	BDL	4
Endosulfan I	BDL	4
Endosulfan II	BDL	7
Endosulfan sulfate	BDL	7
Endrin	BDL	4
Endrin aldehyde	BDL	7
Heptachlor	BDL	4
Heptachlor Epoxide	BDL	4
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40
Toxaphene	BDL	100
Endrin Ketone	BDL	7
Methoxychlor	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
 M



0000010

0000011

Laboratory number: 44328-004  
Sample Designation: CLJ62-A3S-011-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/09/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 11 % , elevating the reporting limits  
by a factor of 1.12 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
RH

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

Laboratory number: 44328-004DL  
 Sample Designation: CLJ62-A3S-011-CS  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/12/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 11 % , elevating the reporting limits  
 by a factor of 1.12 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	70
alpha-BHC	BDL	70
beta-BHC	BDL	70
gamma-BHC (Lindane)	BDL	70
delta-BHC	BDL	70
alpha-Chlordane	BDL	70
gamma-Chlordane	BDL	70
4,4'-DDT	920	100
4,4'-DDE	36 J	70
4,4'-DDD	390	100
Dieldrin	BDL	70
Endosulfan I	BDL	70
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	70
Endrin aldehyde	BDL	100
Heptachlor	BDL	70
Heptachlor Epoxide	BDL	70
Toxaphene	BDL	3000
Endrin Ketone	BDL	100
Methoxychlor	BDL	700

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 M



Laboratory number: 44328-005  
Sample Designation: CLJ62-A2S-002-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/14/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 11 % , elevating the reporting limits  
by a factor of 1.12 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	510	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
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Laboratory number: 44328-005RE  
Sample Designation: CLJ62-A2S-002-CS  
Date Extracted: 06/14/95  
Date Analyzed: 06/16/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 11 % , elevating the reporting limits  
by a factor of 1.12 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	400	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
M

Laboratory number: 44328-005DL  
Sample Designation: CLJ62-A2S-002-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/13/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 11 % , elevating the reporting limits  
by a factor of 1.12 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	400
alpha-BHC	BDL	400
beta-BHC	BDL	400
gamma-BHC (Lindane)	BDL	400
delta-BHC	BDL	400
alpha-Chlordane	260 J	400
gamma-Chlordane	220 J	400
4,4'-DDT	1600	700
4,4'-DDE	450	400
4,4'-DDD	6000	700
Dieldrin	BDL	400
Endosulfan I	BDL	400
Endosulfan II	BDL	700
Endosulfan sulfate	BDL	700
Endrin	BDL	400 J -
Endrin aldehyde	BDL	700
Heptachlor	BDL	400
Heptachlor Epoxide	BDL	400
Toxaphene	BDL	10000
Endrin Ketone	BDL	700
Methoxychlor	BDL	4000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

Laboratory number: 44328-005RDL  
 Sample Designation: CLJ62-A2S-002-CS  
 Date Extracted: 06/14/95  
 Date Analyzed: 06/15/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 11 % , elevating the reporting limits  
 by a factor of 1.12 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	400
alpha-BHC	BDL	400
beta-BHC	BDL	400
gamma-BHC (Lindane)	BDL	400
delta-BHC	BDL	400
alpha-Chlordane	280 J	400
gamma-Chlordane	240 J	400
4,4'-DDT	3000	700
4,4'-DDE	520	400
4,4'-DDD	4300	700
Dieldrin	BDL	400
Endosulfan I	BDL	400
Endosulfan II	BDL	700
Endosulfan sulfate	BDL	700
Endrin	BDL	400
Endrin aldehyde	BDL	700
Heptachlor	BDL	400
Heptachlor Epoxide	BDL	400
Toxaphene	BDL	10000
Endrin Ketone	BDL	700
Methoxychlor	BDL	4000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 H



Laboratory number: 44328-006  
Sample Designation: CLJ62-A2S-002-CSD  
Date Extracted: 06/09/95  
Date Analyzed: 06/14/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 12 % , elevating the reporting limits  
by a factor of 1.13 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	1200	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

Laboratory number: 44328-006RE  
Sample Designation: CLJ62-A2S-002-CSD  
Date Extracted: 06/14/95  
Date Analyzed: 06/16/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 12 % , elevating the reporting limits  
by a factor of 1.13 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	200
PCB-1254 (Arochlor 1254)	BDL	200
PCB-1221 (Arochlor 1221)	BDL	200
PCB-1232 (Arochlor 1232)	BDL	200
PCB-1248 (Arochlor 1248)	BDL	200
PCB-1260 (Arochlor 1260)	3200	200
PCB-1016 (Arochlor 1016)	BDL	200

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
H

**pace**  
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Laboratory number: 44328-006DL  
 Sample Designation: CLJ62-A2S-002-CSD  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 12 % , elevating the reporting limits  
 by a factor of 1.13 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	4000
alpha-BHC	BDL	4000
beta-BHC	BDL	4000
gamma-BHC (Lindane)	BDL	4000
delta-BHC	BDL	4000
alpha-Chlordane	BDL	4000
gamma-Chlordane	BDL	4000
4,4'-DDT	61000	7000
4,4'-DDE	2600 J	4000
4,4'-DDD	13000	7000
Dieldrin	BDL	4000
Endosulfan I	BDL	4000
Endosulfan II	BDL	7000
Endosulfan sulfate	BDL	7000
Endrin	BDL	4000 J
Endrin aldehyde	BDL	7000
Heptachlor	BDL	4000
Heptachlor Epoxide	BDL	4000
Toxaphene	BDL	100000
Endrin Ketone	BDL	7000
Methoxychlor	BDL	40000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 10

Laboratory number: 44328-006RDL  
Sample Designation: CLJ62-A2S-002-CSD  
Date Extracted: 06/14/95  
Date Analyzed: 06/15/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 12 % , elevating the reporting limits  
by a factor of 1.13 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	9000
alpha-BHC	BDL	9000
beta-BHC	BDL	9000
gamma-BHC (Lindane)	BDL	9000
delta-BHC	BDL	9000
alpha-Chlordane	BDL	9000
gamma-Chlordane	BDL	9000
4,4'-DDT	170000	20000
4,4'-DDE	5600 J	9000
4,4'-DDD	21000	20000
Dieldrin	BDL	9000
Endosulfan I	BDL	9000
Endosulfan II	BDL	20000
Endosulfan sulfate	BDL	20000
Endrin	BDL	9000
Endrin aldehyde	BDL	20000
Heptachlor	BDL	9000
Heptachlor Epoxide	BDL	9000
Toxaphene	BDL	400000
Endrin Ketone	BDL	20000
Methoxychlor	BDL	90000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

7/22/95  
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**pace**  
INCORPORATED  
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0000020

Laboratory number: 44328-007  
Sample Designation: CLJ62-A3S-015-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 10 % , elevating the reporting limits  
by a factor of 1.11 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000021

Laboratory number: 44328-007DL  
Sample Designation: CLJ62-A3S-015-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/13/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 10 % , elevating the reporting limits  
by a factor of 1.11 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	90
alpha-BHC	BDL	90
beta-BHC	BDL	90
gamma-BHC (Lindane)	BDL	90
delta-BHC	BDL	90
alpha-Chlordane	BDL	90
gamma-Chlordane	BDL	90
4,4'-DDT	98 J	200
4,4'-DDE	110	90
4,4'-DDD	1500	200
Dieldrin	BDL	90
Endosulfan I	BDL	90
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	90 J-
Endrin aldehyde	BDL	200
Heptachlor	BDL	90
Heptachlor Epoxide	BDL	90
Toxaphene	BDL	4000
Endrin Ketone	BDL	200
Methoxychlor	BDL	900

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit  
J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
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**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000022

Laboratory number: 44328-008  
Sample Designation: CLJ62-A3S-014-BC  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 15 % , elevating the reporting limits  
by a factor of 1.17 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
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**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000023

Laboratory number: 44328-008DL  
Sample Designation: CLJ62-A3S-014-BC  
Date Extracted: 06/09/95  
Date Analyzed: 06/13/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 15 % , elevating the reporting limits  
by a factor of 1.17 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	40
alpha-BHC	BDL	40
beta-BHC	BDL	40
gamma-BHC (Lindane)	BDL	40
delta-BHC	BDL	40
alpha-Chlordane	25	J 40
gamma-Chlordane	27	J 40
4,4'-DDT	350	80
4,4'-DDE	49	40
4,4'-DDD	380	80
Dieldrin	BDL	40
Endosulfan I	BDL	40
Endosulfan II	BDL	80
Endosulfan sulfate	BDL	80
Endrin	BDL	40
Endrin aldehyde	BDL	80
Heptachlor	BDL	40
Heptachlor Epoxide	BDL	40
Toxaphene	BDL	2000
Endrin Ketone	BDL	80
Methoxychlor	BDL	400

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit  
J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
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**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000024

Laboratory number: 44328-009  
Sample Designation: CLJ62-A3S-014-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 14 % , elevating the reporting limits  
by a factor of 1.16 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
H

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000025

Laboratory number: 44328-009DL  
Sample Designation: CLJ62-A3S-014-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/13/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 14 % , elevating the reporting limits  
by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	800
alpha-BHC	BDL	800
beta-BHC	BDL	800
gamma-BHC (Lindane)	BDL	800
delta-BHC	BDL	800
alpha-Chlordane	BDL	800
gamma-Chlordane	BDL	800
4,4'-DDT	11000	2000
4,4'-DDE	1200	800
4,4'-DDD	2500	2000
Dieldrin	BDL	800
Endosulfan I	BDL	800
Endosulfan II	BDL	2000
Endosulfan sulfate	BDL	2000
Endrin	BDL	800 J
Endrin aldehyde	BDL	2000
Heptachlor	BDL	800
Heptachlor Epoxide	BDL	800
Toxaphene	BDL	30000
Endrin Ketone	BDL	2000
Methoxychlor	BDL	8000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/2/95  
PS

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000026

Laboratory number: 44328-009RE  
 Sample Designation: CLJ62-A3S-014-CS  
 Date Extracted: 06/14/95  
 Date Analyzed: 06/16/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	800
alpha-BHC	BDL	800
beta-BHC	BDL	800
gamma-BHC (Lindane)	BDL	800
delta-BHC	BDL	800
alpha-Chlordane	BDL	800
gamma-Chlordane	BDL	800
4,4'-DDT	15000	2000
4,4'-DDE	1600	800
4,4'-DDD	2900	2000
Dieldrin	BDL	800
Endosulfan I	BDL	800
Endosulfan II	BDL	2000
Endosulfan sulfate	BDL	2000
Endrin	BDL	800
Endrin aldehyde	BDL	2000
Heptachlor	BDL	800
Heptachlor Epoxide	BDL	800
PCB-1242 (Arochlor 1242)	BDL	8000
PCB-1254 (Arochlor 1254)	BDL	8000
PCB-1221 (Arochlor 1221)	BDL	8000
PCB-1232 (Arochlor 1232)	BDL	8000
PCB-1248 (Arochlor 1248)	BDL	8000
PCB-1260 (Arochlor 1260)	BDL	8000
PCB-1016 (Arochlor 1016)	BDL	8000
Toxaphene	BDL	30000
Endrin Ketone	BDL	2000
Methoxychlor	BDL	8000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
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**pace**  
 INCORPORATED  
 THE ASSURANCE OF QUALITY

0000027

Laboratory number: 44328-010  
Sample Designation: CLJ62-A3S-015-BC  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 13 % , elevating the reporting limits  
by a factor of 1.14 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
M

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

Laboratory number: 44328-010DL  
 Sample Designation: CLJ62-A3S-015-BC  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 13 % , elevating the reporting limits  
 by a factor of 1.14 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	80
alpha-BHC	BDL	80
beta-BHC	BDL	80
gamma-BHC (Lindane)	BDL	80
delta-BHC	BDL	80
alpha-Chlordane	BDL	80
gamma-Chlordane	BDL	80
4,4'-DDT	1000	200
4,4'-DDE	BDL	80
4,4'-DDD	950	200
Dieldrin	BDL	80
Endosulfan I	BDL	80
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	80
Endrin aldehyde	BDL	200
Heptachlor	BDL	80
Heptachlor Epoxide	BDL	80
Toxaphene	BDL	3000
Endrin Ketone	BDL	200
Methoxychlor	BDL	800

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 18



Laboratory number: 44328-011  
Sample Designation: CLJ62-A3S-015-BCD  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 11 % , elevating the reporting limits  
by a factor of 1.12 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
KJ

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

Laboratory number: 44328-011DL  
Sample Designation: CLJ62-A3S-015-BCD  
Date Extracted: 06/09/95  
Date Analyzed: 06/13/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 11 % , elevating the reporting limits  
by a factor of 1.12 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	70
alpha-BHC	BDL	70
beta-BHC	BDL	70
gamma-BHC (Lindane)	BDL	70
delta-BHC	BDL	70
alpha-Chlordane	BDL	70
gamma-Chlordane	BDL	70
4,4'-DDT	390	100
4,4'-DDE	45	J 70
4,4'-DDD	690	100
Dieldrin	BDL	70
Endosulfan I	BDL	70
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	70
Endrin aldehyde	BDL	100
Heptachlor	BDL	70
Heptachlor Epoxide	BDL	70
Toxaphene	BDL	3000
Endrin Ketone	BDL	100
Methoxychlor	BDL	700

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit  
J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
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INCORPORATED  
THE ASSURANCE OF QUALITY

0000031

Laboratory number: 44328-012  
Sample Designation: CLJ62-A3S-013-BCD  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 12 % , elevating the reporting limits  
by a factor of 1.14 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
PC

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000032

Laboratory number: 44328-012DL  
 Sample Designation: CLJ62-A3S-013-BCD  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 12 % , elevating the reporting limits  
 by a factor of 1.14 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	40
alpha-BHC	BDL	40
beta-BHC	BDL	40
gamma-BHC (Lindane)	BDL	40
delta-BHC	BDL	40
alpha-Chlordane	BDL	40
gamma-Chlordane	BDL	40
4,4'-DDT	420	80
4,4'-DDE	20	40
4,4'-DDD	590	80
Dieldrin	BDL	40
Endosulfan I	BDL	40
Endosulfan II	BDL	80
Endosulfan sulfate	BDL	80
Endrin	BDL	40
Endrin aldehyde	BDL	80
Heptachlor	BDL	40
Heptachlor Epoxide	BDL	40
Toxaphene	BDL	2000
Endrin Ketone	BDL	80
Methoxychlor	BDL	400

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 JB



Laboratory number: 44328-013  
Sample Designation: CLJ62-A3S-012-CS  
Date Extracted: 06/09/95  
Date Analyzed: 06/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 15 % , elevating the reporting limits  
by a factor of 1.18 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	40
PCB-1254 (Arochlor 1254)	BDL	40
PCB-1221 (Arochlor 1221)	BDL	40
PCB-1232 (Arochlor 1232)	BDL	40
PCB-1248 (Arochlor 1248)	BDL	40
PCB-1260 (Arochlor 1260)	BDL	40
PCB-1016 (Arochlor 1016)	BDL	40

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/96  
H

**PACE**  
INCORPORATED  
THE ASSURANCE OF QUALITY

0000034

Laboratory number: 44328-013DL  
 Sample Designation: CLJ62-A3S-012-CS  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 15 % , elevating the reporting limits  
 by a factor of 1.18 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	200
alpha-BHC	BDL	200
beta-BHC	BDL	200
gamma-BHC (Lindane)	BDL	200
delta-BHC	BDL	200
alpha-Chlordane	BDL	200
gamma-Chlordane	BDL	200
4,4'-DDT	3100	400
4,4'-DDE	200	200
4,4'-DDD	2400	400
Dieldrin	BDL	200
Endosulfan I	BDL	200
Endosulfan II	BDL	400
Endosulfan sulfate	BDL	400
Endrin	BDL	200
Endrin aldehyde	BDL	400
Heptachlor	BDL	200
Heptachlor Epoxide	BDL	200
Toxaphene	BDL	8000
Endrin Ketone	BDL	400
Methoxychlor	BDL	2000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 #



Laboratory number: 44328-014  
 Sample Designation: CLJ62-A3-RB  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/12/95  
 Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHOD 8080

BDL = Below reporting limit

9/22/95  
 14



Laboratory number: 44328-015  
 Sample Designation: CLJ62-A4-RB  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05 J -
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHOD 8080

BDL = Below reporting limit

9/22/95  
 H



Laboratory number: 44328-016  
 Sample Designation: CLJ62-A2-RB  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05 J ✓
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHOD 8080

BDL = Below reporting limit

9/22/95  
 #



Laboratory number: 44328-017  
 Sample Designation: CLJ62-FB  
 Date Extracted: 06/09/95  
 Date Analyzed: 06/13/95  
 Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHOD 8080

BDL = Below reporting limit

9/22/95  
 #

LDC #: 1579B3  
 SDG #: 44328  
 Laboratory: Pace, Inc.

**VALIDATION COMPLETENESS WORKSHEET**

EPA Level III  NEESA Level C

Date: 9-1-95

Page: 1 of 1

Reviewer: DW

2nd Reviewer: (Signature)

**METHOD:** GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-7-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	r > 0.995
IV.	Continuing calibration	SW	2D
V.	Blanks	A	
VI.	Surrogate spikes	SWA	1/15/95
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D <sub>1</sub> = 2,3. D <sub>2</sub> = 5,8. D <sub>3</sub> = 15,16. D <sub>4</sub> = 7,10. D <sub>5</sub> = 6,9
XV.	Field blanks	ND	R = 19-21. FB = 22

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinsate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

**Validated Samples:**

1	CLJ62-A4S-001-BC	SOIL	11	CLJ62-A3S-015-CS	SOIL	21R	CLJ62-A2-RB	AQ
2 D <sub>1</sub>	CLJ62-A4S-001-CS		12	CLJ62-A3S-014-BC		22FB	CLJ62-FB	↓
3 D <sub>1</sub>	CLJ62-A4S-001-CSD		13	CLJ62-A3S-014-CS		23	CLJ62-A2S-002-CSDMS	SOIL
4	CLJ62-A3S-011-CS		14	CLJ62-A3S-014-CSRE**		24	CLJ62-A2S-002-CSDMSD	↓
5 D <sub>2</sub>	CLJ62-A2S-002-CS*		15 D <sub>3</sub>	CLJ62-A3S-015-BC		25 D <sub>5</sub>	CLJ62-A2S-002-CSREDL**	SOIL ↓
6 D <sub>5</sub>	CLJ62-A2S-002-CSRE*		16 D <sub>3</sub>	CLJ62-A3S-015-BCD		26 D <sub>6</sub>	CLJ62-A2S-002-CSDREOL*	↓
7 D <sub>4</sub>	CLJ62-A2S-002-CSQDL**		17	CLJ62-A3S-013-BCD		27	B-P4324 SCC BIK	SOIL ↓
8 D <sub>2</sub>	CLJ62-A2S-002-CSD*		18	CLJ62-A3S-012-CS		28	B-P4327 BIK	↓
9 D <sub>5</sub>	CLJ62-A2S-002-CSDRE*		19R	CLJ62-A3-RB		29	BP4325 BIK	AQ
10 D <sub>2</sub>	CLJ62-A2S-002-CSDQDL**		20R	CLJ62-A4-RB		30		

\*PCBs only, \*\* = Pesticides only

LDC #: 151  
SDG #: 44

VALIDATION FINC WORKSHEET  
Continuing Calibration

1 of 1  
Reviewer: DA  
2nd Reviewer: (60)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N" Not applicable questions are identified as "N/A".

- What type or calibration verification calculation was performed?  %D or  RPD
- Were Evaluation mix standards run before initial calibration and before samples?  Y  N  N/A
- Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard ( $\leq 20.0\%$  for individual breakdowns)?  Y  N  N/A
- Was at least one Individual Mix standards A and/or B run daily to verify the working curve?  Y  N  N/A
- Were continuing standards analyzed at a frequency of every 10 samples to verify the working curve?  Y  N  N/A
- Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of  $\leq 15.0\%$ ?  Y  N  N/A

Level IV/D Only

- Were the retention times for all calibrated compounds within their respective acceptance windows?  Y  N  N/A
- Were the percent difference (%D) results recalculated? (Please see Calibration verification results verification worksheet.)  Y  N  N/A
- Were the (%D) recalculated results within 10.0% of the reported results?  Y  N  N/A

#	Date	Standard ID	Column	Compound	%D / RPD (Limit $\leq 15.0$ )	RT (Limits)	Associated Samples	Qualifications
1	6-9-95	IND LAB P8600	112/110	D	16.4	( )	2, 3, <del>4, 5</del> PCB ONLY	J/P (only 2, 3)
2	6-12-95	IND LAB P8675	112/110	E	15.4	( )	18-22	
3	6-13-95	IND LAB P8675	112/110	K	20.4	( )	7, 10, 11, 13, 18, 23, 24	
4	6-13-95	IND LAB P8675	112/110	K	20.7	( )	7, 10, 11, 13, 18, 23, 24	
5	6-14-95	IND LAB P8675	112/110	K	23.2	( )	5, 8 PCB ONLY	No Qual
6	6-14-95	IND LAB P8675	112/110	K	23.3	( )	5, 8 PCB ONLY	No Qual
						( )		
						( )		
						( )		
						( )		
						( )		

- |              |                       |                  |                       |                    |                 |                  |             |           |
|--------------|-----------------------|------------------|-----------------------|--------------------|-----------------|------------------|-------------|-----------|
| A. Alpha-BHC | E. Heptachlor         | I. Dieldrin      | M. 4,4'-DDD           | Q. Endrin ketone   | U. Toxaphene    | Y. Aroclor-1242  | CC. DB 608  | GG. _____ |
| B. Beta-BHC  | F. Aldrin             | J. 4,4'-DDE      | N. Endosulfan sulfate | R. Endrin aldehyde | V. Aroclor-1018 | Z. Aroclor-1248  | DD. DB 1701 | HH. _____ |
| C. Delta-BHC | G. Heptachlor epoxide | K. Endrin        | O. 4,4'-DDT           | S. Alpha-chlordane | W. Aroclor-1221 | AA. Aroclor-1254 | EE. _____   | II. _____ |
| D. Gamma-BHC | H. Endosulfan I       | L. Endosulfan II | P. Methoxychlor       | T. Gamma-chlordane | X. Aroclor-1232 | BB. Aroclor-1260 | FF. _____   | JJ. _____ |



LDC #: 1579 B3  
SDG #: 4 28

VALIDATION FINDINGS WORKSHEET  
Matrix Spike/M.S.D. Spike Duplicates

Page: 1 of 1  
Reviewer: [Signature]  
2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?  
 Level IV/D Only  
 Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-13-95	23/24	ALL	XR (2 RPD) QC (LIMIT)	ALL (OUT OF) DUE TO SAMPLE DILUTION AND CONC (>2x)	( ) ( ) ( ) ( )	ALL Soil Samples	NO QUAL
2	6-8-95	NO AQ MS/MSD	ALL	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	ALL AQ Samples	NONE/P

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	46-127	≤ 50	56-123	≤ 15
B	Heptachlor	35-130	≤ 31	40-131	≤ 20
C	Aldrin	34-132	≤ 43	40-120	≤ 22
D	Dieldrin	31-134	≤ 38	52-126	≤ 18
E	Endrin	42-134	≤ 45	56-121	≤ 21
F	4,4'-DDT	23-134	≤ 50	38-127	≤ 27
G					
H					
I					
J					

LDC #: 1579B3  
 SDG #: 44328

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 1 of 2  
 Reviewer: PP  
 2nd reviewer: (9)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

N N/A Were field duplicate pairs identified in this SDG?  
 N N/A Were target compounds detected in this field duplicate pairs?

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	2	3	
4,4'-DDT	11	33	100
4,4'-DDE	18	48	91

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	5	8	
PCB 1260	510	1200	81

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	7	10	
$\alpha$ -Chlordane	260	ND	NC
$\gamma$ -Chlordane	220	ND	NC
4,4'-DDT	1600	61000	190
4,4'-DDE	450	2600	741
4,4'-DDD	6000	13000	74

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	6	9	
PCB 1260	400	3200	156

LDC #: 1579 B3  
 SDG #: 44328

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 2 of 2  
 Reviewer: DA  
 2nd reviewer: (Signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Y  N  N/A Were field duplicate pairs identified in this SDG?  
 Y  N  N/A Were target compounds detected in this field duplicate pairs?

Compound	Concentration ( <u>mg/kg</u> )		RPD
	25	26	
<i>α-Chlor dane</i>	280	ND	NC
<i>γ-Chlor dane</i>	240	ND	NC
<i>4,4'- DDT</i>	3000	170000	193
<i>4,4'- DDE</i>	520	5600	166
<i>4,4'- DDD</i>	4300	21000	132

Compound	Concentration ( <u>mg/kg</u> )		RPD
	15	16	
<i>4,4'- DDT</i>	1000	390	88
<i>4,4'- DDE</i>	ND	45	NC
<i>4,4'- DDD</i>	950	690	32

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** June 8, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG):** 44360

**Sample Identification**

CLJ62-A3-FB  
CLJ62-A3-RB  
CLJ62-A3S-016-BC  
CLJ62-A3S-016-BCMS  
CLJ62-A3S-016-BCMSD

## Introduction

This data review covers 3 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient ( $r$ ) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

## VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44360.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chlorendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria.

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44360.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria.

## IX. Regional Quality Assurance and Quality Control

Not applicable.

## X. Pesticide Cleanup Checks

### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

## XI. Target Compound Identification

Raw data were not checked for this SDG.

## XII. Compound Quantitation and Reported CRQLs

Raw data were not checked for this SDG.

## XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

## XIV. Field Duplicates

No field duplicates were identified in this SDG.

## **XV. Field Blanks**

Sample CLJ62-A3-RB was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in the rinsate.

Sample CLJ62-A3-FB was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44360**

SDG	Sample	Compound	Flag	A or P	Reason
44360	CLJ62-A3-FB CLJ62-A3-RB CLJ62-A3S-016-BC	All TCL compounds	None	P	Surrogate spikes
44360	CLJ62-A3-FB CLJ62-A3-RB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44360**

No Laboratory Blank Data Qualified in this SDG.

1579C

Laboratory number: 44360-001  
Sample Designation: CLJ62-A3-FB  
Date Extracted: 06/14/95  
Date Analyzed: 06/15/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/23/95  
M

Laboratory number: 44360-002  
Sample Designation: CLJ62-A3-RB  
Date Extracted: 06/14/95  
Date Analyzed: 06/15/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/22/95  
M

Laboratory number: 44360-003  
 Sample Designation: CLJ62-A3S-016-BC  
 Date Extracted: 06/14/95  
 Date Analyzed: 06/16/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 7 % , elevating the reporting limits  
 by a factor of 1.08 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	40
alpha-BHC	BDL	40
beta-BHC	BDL	40
gamma-BHC (Lindane)	BDL	40
delta-BHC	BDL	40
alpha-Chlordane	21	J 40
gamma-Chlordane	19	J 40
4,4'-DDT	510	70
4,4'-DDE	43	40
4,4'-DDD	320	70
Dieldrin	BDL	40
Endosulfan I	BDL	40
Endosulfan II	BDL	70
Endosulfan sulfate	BDL	70
Endrin	BDL	40
Endrin aldehyde	BDL	70
Heptachlor	BDL	40
Heptachlor Epoxide	BDL	40
PCB-1242 (Arochlor 1242)	BDL	400
PCB-1254 (Arochlor 1254)	BDL	400
PCB-1221 (Arochlor 1221)	BDL	400
PCB-1232 (Arochlor 1232)	BDL	400
PCB-1248 (Arochlor 1248)	BDL	400
PCB-1260 (Arochlor 1260)	BDL	400
PCB-1016 (Arochlor 1016)	BDL	400
Toxaphene	BDL	1000
Endrin Ketone	BDL	70
Methoxychlor	BDL	400

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit.

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 AB

LDC #: 1579C3

## VALIDATION COMPLETENESS WORKSHEET

Date: 9-13-95

SDG #: 44360

 EPA Level III  NEESA Level C

Page: 1 of 1

Laboratory: Pace, Inc.

Reviewer: MM2nd Reviewer: (Signature)

METHOD: GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-8-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	1.00.995
IV.	Continuing calibration	A	RD
V.	Blanks	A	
VI.	Surrogate spikes	SWA	(Signature)
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	AA	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	ND	FB=1, R=2

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

## Validated Samples:

1	FB	CLJ62-A3-FB	AQ	11		21
2	R	CLJ62-A3-RB	↓	12		22
3		CLJ62-A3S-016-BC	SOIL	13		23
4		CLJ62-A3S-016-BCMS		14		24
5		CLJ62-A3S-016-BCMSD		15		25
6		B-P 4327 BIK	↓	16		26
7		B-P 4328 BIK	AQ	17		27
8				18		28
9				19		29
				20		30



LDC #: 1579 C3  
 SDG #: 4 10

VALIDATION FINDINGS WORKSHEET  
 Matrix Spike/Matrix Spike Duplicates

Page: 1 of 2  
 Reviewer: MD  
 2nd Reviewer: (signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?

Level IV/D Only

- Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-16-95	5 (MSD)	ALL	XR (2 RPD) QC (LIMIT)	ALL (OUT OF) DVE (TO SAMPLE DILUTION AND SOME COMPOUNDS CONC (72x) SPIKE (AMOUNT)	( ) ( ) ( ) ( )	ALL Soil Samples	NO QUAL.
2	6-16-95	No AQ M./MSD	ALL	( ) ( ) ( 23-134 ) ( 32.81-111.17 )	( ) ( ) ( ) ( )	( ) ( ) ( ) ( )	ALL AQ Samples	NO QA
3	6-16-95	4 (MS) SAMPLE CONC. 72x SPIKE AMOUNT	F G H	NC (23-134) NC (29.59-111.17) NC (30.36-99.07)	( ) ( ) ( ) ( )	( ) ( ) ( ) ( )	ALL SOIL SAMPLES	NO QUAL.

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	46-127	≤ 50	56-123	≤ 15
B	Heptachlor	35-130	≤ 31	40-131	≤ 20
C	Aldrin	34-132	≤ 43	40-120	≤ 22
D	Dieldrin	31-134 33.19-9239	≤ 30	52-126	≤ 18
E	Endrin	42-139	≤ 45	56-121	≤ 21
F	4,4'-DDT	23-134 32.81-111.17	≤ 30	38-127	≤ 27
G	4,4'-DDE	29.59-111.17	≤ 30		
H	4,4'-DDD	30.36-99.07	≤ 30		
I					
J					

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** June 15, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG):** 44393

**Sample Identification**

CLJ62-A3S-11.6-BC  
CLJ62-A3S-12.6-BC  
CLJ62-A3S-13.6-CS  
CLJ62-A3S-16.6-CS  
CLJ62-A3S-16.6-CSD  
CLJ62-A3S-17.6-BC  
CLJ62-A3S-17.6-CS  
CLJ62-A2S-001-ZBC  
CLJ62-A2S-002-ZCS  
CLJ62-A2S-003-ZCS  
CLJ62-A3S-RB  
CLJ62-A2S-RB  
CLJ62-FB  
CLJ62-A3S-11.6-BCMS  
CLJ62-A3S-11.6-BCMSD

## Introduction

This data review covers 12 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient ( $r$ ) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits with the following exceptions:

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8675	112/110	Heptachlor	22.4	CLJ62-A3S-17.6-BC CLJ62-A3S-17.6-CS CLJ62-A2S-001-ZBC CLJ62-A2S-002-ZCS CLJ62-A2S-003-ZCS	J	P
IND2AB P8675	112/110	4,4'-DDD Endrin ketone	28.5 21.1	CLJ62-A3S-11.6-BC CLJ62-A3S-12.6-BC CLJ62-A3S-13.6-CS CLJ62-A3S-16.6-CS CLJ62-A3S-16.6-CSD	J J	P
IND2AB P8675	112/110	Endrin	17.8	CLJ62-A3S-11.6-BC CLJ62-A3S-12.6-BC CLJ62-A3S-13.6-CS CLJ62-A3S-16.6-CS CLJ62-A3S-16.6-CSD	J	P
IND2AB P8675	112/110	Gamma-chlordane Endosulfan II 4,4'-DDT Endrin aldehyde Endrin ketone	15.9 19.0 17.2 24.4 32.0	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	J J J J J	P

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8675	112/110	4,4'-DDT Endrin aldehyde Endrin ketone	17.6 23.5 26.4	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	J J J	P
AR1254 0.5PPM P8668	112/110	Aroclor-1254	16.3	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	J	P
IND2AB P8675	112/110	Endrin ketone	18.3	CLJ62-A3S-11.6-BCMS CLJ62-A3S-11.6-BCMSD	J	P

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

## VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44393.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chloroendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria.

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44393.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

### VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria.

### IX. Regional Quality Assurance and Quality Control

Not applicable.

### X. Pesticide Cleanup Checks

#### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

#### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

### XI. Target Compound Identification

Raw data were not checked for this SDG.

### XII. Compound Quantitation and Reported CRQLs

Raw data were not checked for this SDG.

### XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

### XIV. Field Duplicates

Samples CLJ62-A3S-16.6-CS and CLJ62-A3S-16.6-CSD were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-16.6-CS	CLJ62-A3S-16.6-CSD	
4,4'-DDD	1100	1400	24

### XV. Field Blanks

Samples CLJ62-A3S-RB and CLJ62-A2S-RB were identified as rinsates. No chlorinated pesticide or PCB contaminants were found in the rinsates.

Sample CLJ62-FB was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

Camp Lejeune

Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44393

SDG	Sample	Compound	Flag	A or P	Reason
44393	CLJ62-A3S-17.6-BC CLJ62-A3S-17.6-CS CLJ62-A2S-001-ZBC CLJ62-A2S-002-ZCS CLJ62-A2S-003-ZCS	Heptachlor	J	P	Continuing calibration (%D)
44393	CLJ62-A3S-11.6-BC CLJ62-A3S-12.6-BC CLJ62-A3S-13.6-CS CLJ62-A3S-16.6-CS CLJ62-A3S-16.6-CSD	4,4'-DDD Endrin ketone	J J	P	Continuing calibration (%D)
44393	CLJ62-A3S-11.6-BC CLJ62-A3S-12.6-BC CLJ62-A3S-13.6-CS CLJ62-A3S-16.6-CS CLJ62-A3S-16.6-CSD	Endrin	J	P	Continuing calibration (%D)
44393	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	Gamma-chlordane Endosuffan II 4,4'-DDT Endrin aldehyde Endrin ketone	J J J J J	P	Continuing calibration (%D)
44393	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	4,4'-DDT Endrin aldehyde Endrin ketone	J J J	P	Continuing calibration (%D)
44393	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	Aroclor-1254	J	P	Continuing calibration (%D)
44393	CLJ62-A3S-11.6-BC CLJ62-A3S-12.6-BC CLJ62-A3S-13.6-CS CLJ62-A3S-16.6-CS CLJ62-A3S-16.6-CSD CLJ62-A3S-17.6-BC CLJ62-A3S-17.6-CS CLJ62-A2S-001-ZBC CLJ62-A2S-002-ZCS CLJ62-A2S-003-ZCS CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	All TCL compounds	None	P	Surrogate spikes
44393	CLJ62-A3S-RB CLJ62-A2S-RB CLJ62-FB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44393**

No Laboratory Blank Data Qualified in this SDG.

Laboratory number: 44393-001  
 Sample Designation: CLJ62-A3S-11.6BC  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 7 % , elevating the reporting limits  
 by a factor of 1.07 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	200
alpha-BHC	BDL	200
beta-BHC	BDL	200
gamma-BHC (Lindane)	BDL	200
delta-BHC	BDL	200
alpha-Chlordane	530	200
gamma-Chlordane	480	200
4,4'-DDT	240	400 J
4,4'-DDE	330	200
4,4'-DDD	2100	400 J
Dieldrin	BDL	200
Endosulfan I	BDL	200
Endosulfan II	BDL	400
Endosulfan sulfate	BDL	400
Endrin	BDL	200 J
Endrin aldehyde	BDL	400
Heptachlor	BDL	200
Heptachlor Epoxide	BDL	200
PCB-1242 (Arochlor 1242)	BDL	2000
PCB-1254 (Arochlor 1254)	BDL	2000
PCB-1221 (Arochlor 1221)	BDL	2000
PCB-1232 (Arochlor 1232)	BDL	2000
PCB-1248 (Arochlor 1248)	BDL	2000
PCB-1260 (Arochlor 1260)	BDL	2000
PCB-1016 (Arochlor 1016)	BDL	2000
Toxaphene	BDL	9000
Endrin Ketone	BDL	400 J
Methoxychlor	BDL	2000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 H



Laboratory number: 44393-002  
 Sample Designation: CLJ62-AJS-12.6-BC  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 6 %, elevating the reporting limits  
 by a factor of 1.07 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	100
alpha-BHC	BDL	100
beta-BHC	BDL	100
gamma-BHC (Lindane)	BDL	100
delta-BHC	BDL	100
alpha-Chlordane	330	100
gamma-Chlordane	370	100
4,4'-DDT	190	J 200
4,4'-DDE	170	100
4,4'-DDD	300	200 J
Dieldrin	BDL	100
Endosulfan I	BDL	100
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	100 J
Endrin aldehyde	BDL	200
Heptachlor	BDL	100
Heptachlor Epoxide	BDL	100
PCB-1242 (Arochlor 1242)	BDL	1000
PCB-1254 (Arochlor 1254)	BDL	1000
PCB-1221 (Arochlor 1221)	BDL	1000
PCB-1232 (Arochlor 1232)	BDL	1000
PCB-1248 (Arochlor 1248)	BDL	1000
PCB-1260 (Arochlor 1260)	BDL	1000
PCB-1016 (Arochlor 1016)	BDL	1000
Toxaphene	BDL	4000
Endrin Ketone	BDL	200 J
Methoxychlor	BDL	1000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 PJ

Laboratory number: 44393-003  
 Sample Designation: CLJ62-A3S-13.6CS  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 9 % , elevating the reporting limits  
 by a factor of 1.1 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	200
alpha-BHC	BDL	200
beta-BHC	BDL	200
gamma-BHC (Lindane)	BDL	200
delta-BHC	BDL	200
alpha-Chlordane	BDL	200
gamma-Chlordane	BDL	200
4,4'-DDT	240 J	400
4,4'-DDE	280	200
4,4'-DDD	1800	400 J
Dieldrin	BDL	200
Endosulfan I	BDL	200
Endosulfan II	BDL	400
Endosulfan sulfate	BDL	400
Endrin	BDL	200 J
Endrin aldehyde	BDL	400
Heptachlor	BDL	200
Heptachlor Epoxide	BDL	200
PCB-1242 (Arochlor 1242)	BDL	2000
PCB-1254 (Arochlor 1254)	BDL	2000
PCB-1221 (Arochlor 1221)	BDL	2000
PCB-1232 (Arochlor 1232)	BDL	2000
PCB-1248 (Arochlor 1248)	BDL	2000
PCB-1260 (Arochlor 1260)	BDL	2000
PCB-1016 (Arochlor 1016)	BDL	2000
Toxaphene	BDL	9000
Endrin Ketone	BDL	400 J
Methoxychlor	BDL	2000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

7/22/95  
 M

Laboratory number: 44393-004  
 Sample Designation: CLJ62-A3S-16.6CS  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 13 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	100
alpha-BHC	BDL	100
beta-BHC	BDL	100
gamma-BHC (Lindane)	BDL	100
delta-BHC	BDL	100
alpha-Chlordane	BDL	100
gamma-Chlordane	BDL	100
4,4'-DDT	BDL	200
4,4'-DDE	BDL	100
4,4'-DDD	1100	200 J
Dieldrin	BDL	100
Endosulfan I	BDL	100
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	100 J
Endrin aldehyde	BDL	200
Heptachlor	BDL	100
Heptachlor Epoxide	BDL	100
PCB-1242 (Arochlor 1242)	BDL	1000
PCB-1254 (Arochlor 1254)	BDL	1000
PCB-1221 (Arochlor 1221)	BDL	1000
PCB-1232 (Arochlor 1232)	BDL	1000
PCB-1248 (Arochlor 1248)	BDL	1000
PCB-1260 (Arochlor 1260)	BDL	1000
PCB-1016 (Arochlor 1016)	BDL	1000
Toxaphene	BDL	5000
Endrin Ketone	BDL	200 J
Methoxychlor	BDL	1000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 J



Laboratory number: 44393-005  
 Sample Designation: CLJ62-A3S-16.6CSD  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	100
alpha-BHC	BDL	100
beta-BHC	BDL	100
gamma-BHC (Lindane)	BDL	100
delta-BHC	BDL	100
alpha-Chlordane	BDL	100
gamma-Chlordane	BDL	100
4,4'-DDT	BDL	200
4,4'-DDE	BDL	100
4,4'-DDD	1400	200 J
Dieldrin	BDL	100
Endosulfan I	BDL	100
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	100 J
Endrin aldehyde	BDL	200
Heptachlor	BDL	100
Heptachlor Epoxide	BDL	100
PCB-1242 (Arochlor 1242)	BDL	1000
PCB-1254 (Arochlor 1254)	BDL	1000
PCB-1221 (Arochlor 1221)	BDL	1000
PCB-1232 (Arochlor 1232)	BDL	1000
PCB-1248 (Arochlor 1248)	BDL	1000
PCB-1260 (Arochlor 1260)	BDL	1000
PCB-1016 (Arochlor 1016)	BDL	1000
Toxaphene	BDL	5000
Endrin Ketone	BDL	200 J
Methoxychlor	BDL	1000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 PL



Laboratory number: 44393-006  
Sample Designation: CLJ62-A3S-17.6BC  
Date Extracted: 06/16/95  
Date Analyzed: 06/16/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 13 % , elevating the reporting limits  
by a factor of 1.15 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	10
alpha-BHC	BDL	10
beta-BHC	BDL	10
gamma-BHC (Lindane)	BDL	10
delta-BHC	BDL	10
alpha-Chlordane	BDL	10
gamma-Chlordane	BDL	10
4,4'-DDT	BDL	20
4,4'-DDE	BDL	10
4,4'-DDD	BDL	20
Dieldrin	BDL	10
Endosulfan I	BDL	10
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	10
Endrin aldehyde	BDL	20
Heptachlor	BDL	10 J
Heptachlor Epoxide	BDL	10
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	BDL	100
PCB-1016 (Arochlor 1016)	BDL	100
Toxaphene	BDL	500
Endrin Ketone	BDL	20
Methoxychlor	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
pt

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INCORPORATED  
THE ASSURANCE OF QUALITY

0000010

Laboratory number: 44393-007  
 Sample Designation: CLJ62-A3S-17.6CS  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/17/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 9 % , elevating the reporting limits  
 by a factor of 1.1 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	10
alpha-BHC	BDL	10
beta-BHC	BDL	10
gamma-BHC (Lindane)	BDL	10
delta-BHC	BDL	10
alpha-Chlordane	BDL	10
gamma-Chlordane	BDL	10
4,4'-DDT	BDL	20
4,4'-DDE	BDL	10
4,4'-DDD	BDL	20
Dieldrin	BDL	10
Endosulfan I	BDL	10
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	10
Endrin aldehyde	BDL	20
Heptachlor	BDL	10 J
Heptachlor Epoxide	BDL	10
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	BDL	100
PCB-1016 (Arochlor 1016)	BDL	100
Toxaphene	BDL	400
Endrin Ketone	BDL	20
Methoxychlor	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
 /d



Laboratory number: 44393-008  
 Sample Designation: CLJ62-A2S-001ZBC  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/17/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 17 % , elevating the reporting limits  
 by a factor of 1.2 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	10
alpha-BHC	BDL	10
beta-BHC	BDL	10
gamma-BHC (Lindane)	BDL	10
delta-BHC	BDL	10
alpha-Chlordane	BDL	10
gamma-Chlordane	BDL	10
4,4'-DDT	BDL	20
4,4'-DDE	BDL	10
4,4'-DDD	BDL	20
Dieldrin	BDL	10
Endosulfan I	BDL	10
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	10
Endrin aldehyde	BDL	20
Heptachlor	BDL	10 J
Heptachlor Epoxide	BDL	10
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	BDL	100
PCB-1016 (Arochlor 1016)	BDL	100
Toxaphene	BDL	500
Endrin Ketone	BDL	20
Methoxychlor	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
 AS

Laboratory number: 44393-009  
Sample Designation: CLJ62-A2S-002ZCS  
Date Extracted: 06/16/95  
Date Analyzed: 06/17/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 16 % , elevating the reporting limits  
by a factor of 1.18 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	10
alpha-BHC	BDL	10
beta-BHC	BDL	10
gamma-BHC (Lindane)	BDL	10
delta-BHC	BDL	10
alpha-Chlordane	BDL	10
gamma-Chlordane	BDL	10
4,4'-DDT	BDL	20
4,4'-DDE	BDL	10
4,4'-DDD	BDL	20
Dieldrin	BDL	10
Endosulfan I	BDL	10
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	10
Endrin aldehyde	BDL	20
Heptachlor	BDL	10 J
Heptachlor Epoxide	BDL	10
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	BDL	100
PCB-1016 (Arochlor 1016)	BDL	100
Toxaphene	BDL	500
Endrin Ketone	BDL	20
Methoxychlor	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
H

Laboratory number: 44393-010  
 Sample Designation: CLJ62-A2S-003ZCS  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/17/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 18 % , elevating the reporting limits  
 by a factor of 1.22 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	10
alpha-BHC	BDL	10
beta-BHC	BDL	10
gamma-BHC (Lindane)	BDL	10
delta-BHC	BDL	10
alpha-Chlordane	BDL	10
gamma-Chlordane	BDL	10
4,4'-DDT	BDL	20
4,4'-DDE	BDL	10
4,4'-DDD	BDL	20
Dieldrin	BDL	10
Endosulfan I	BDL	10
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	10
Endrin aldehyde	BDL	20
Heptachlor	BDL	10 J
Heptachlor Epoxide	BDL	10
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	BDL	100
PCB-1016 (Arochlor 1016)	BDL	100
Toxaphene	BDL	500
Endrin Ketone	BDL	20
Methoxychlor	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
 H



Laboratory number: 44393-011  
Sample Designation: CLJ62-A3S-RB  
Date Extracted: 06/16/95  
Date Analyzed: 06/19/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.06
alpha-BHC	BDL	0.06
beta-BHC	BDL	0.06
gamma-BHC (Lindane)	BDL	0.06
delta-BHC	BDL	0.06
alpha-Chlordane	BDL	0.06
gamma-Chlordane	BDL	0.06 J
4,4'-DDT	BDL	0.1 J
4,4'-DDE	BDL	0.06
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.06
Endosulfan I	BDL	0.06
Endosulfan II	BDL	0.1 J
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.06
Endrin aldehyde	BDL	0.1 J
Heptachlor	BDL	0.06
Heptachlor Epoxide	BDL	0.06
PCB-1242 (Arochlor 1242)	BDL	0.6
PCB-1254 (Arochlor 1254)	BDL	0.6 J
PCB-1221 (Arochlor 1221)	BDL	0.6
PCB-1232 (Arochlor 1232)	BDL	0.6
PCB-1248 (Arochlor 1248)	BDL	0.6
PCB-1260 (Arochlor 1260)	BDL	0.6
PCB-1016 (Arochlor 1016)	BDL	0.6
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1 J
Methoxychlor	BDL	0.6

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/22/95  
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THE ASSURANCE OF QUALITY

0000015

Laboratory number: 44393-012  
 Sample Designation: CLJ62-A2S-RB  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.06
alpha-BHC	BDL	0.06
beta-BHC	BDL	0.06
gamma-BHC (Lindane)	BDL	0.06 J
delta-BHC	BDL	0.06
alpha-Chlordane	BDL	0.06
gamma-Chlordane	BDL	0.06
4,4'-DDT	BDL	0.1 J
4,4'-DDE	BDL	0.06
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.06
Endosulfan I	BDL	0.06
Endosulfan II	BDL	0.1 J
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.06
Endrin aldehyde	BDL	0.1 J
Heptachlor	BDL	0.06
Heptachlor Epoxide	BDL	0.06
PCB-1242 (Arochlor 1242)	BDL	0.6
PCB-1254 (Arochlor 1254)	BDL	0.6 J
PCB-1221 (Arochlor 1221)	BDL	0.6
PCB-1232 (Arochlor 1232)	BDL	0.6
PCB-1248 (Arochlor 1248)	BDL	0.6
PCB-1260 (Arochlor 1260)	BDL	0.6
PCB-1016 (Arochlor 1016)	BDL	0.6
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1 J
Methoxychlor	BDL	0.6

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
 METHOD 608

BDL = Below reporting limit

9/22/95  
 A



Laboratory number: 44393-013  
 Sample Designation: CLJ62-FB  
 Date Extracted: 06/16/95  
 Date Analyzed: 06/19/95  
 Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.06
alpha-BHC	BDL	0.06
beta-BHC	BDL	0.06
gamma-BHC (Lindane)	BDL	0.06 J
delta-BHC	BDL	0.06
alpha-Chlordane	BDL	0.06
gamma-Chlordane	BDL	0.06
4,4'-DDT	BDL	0.1 J
4,4'-DDE	BDL	0.06
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.06
Endosulfan I	BDL	0.06
Endosulfan II	BDL	0.1 J
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.06
Endrin aldehyde	BDL	0.1 J
Heptachlor	BDL	0.06
Heptachlor Epoxide	BDL	0.06
PCB-1242 (Arochlor 1242)	BDL	0.6
PCB-1254 (Arochlor 1254)	BDL	0.6 J
PCB-1221 (Arochlor 1221)	BDL	0.6
PCB-1232 (Arochlor 1232)	BDL	0.6
PCB-1248 (Arochlor 1248)	BDL	0.6
PCB-1260 (Arochlor 1260)	BDL	0.6
PCB-1016 (Arochlor 1016)	BDL	0.6
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1 J
Methoxychlor	BDL	0.6

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
 METHOD 608

BDL = Below reporting limit

9/22/95  
 PJ



LDC #: 1579D3 **VALIDATION COMPLETENESS WORKSHEET**  
 SDG #: 44393  EPA Level III  NEESA Level C  
 Laboratory: Pace, Inc.

Date: 9-13-95  
 Page: 1 of 1  
 Reviewer: DM  
 2nd Reviewer: (Signature)

METHOD: GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-15-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	$r \geq 0.995$
IV.	Continuing calibration	SW	SD
V.	Blanks	A	
VI.	Surrogate spikes	SW A EB	11/12/13
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	$D_1 = 4, 5$
XV.	Field blanks	ND	$R = 11, 12$ $FB = 13$

Note: A = Acceptable ND = No compounds detected D = Duplicate  
 N = Not provided/applicable R = Rinsate TB = Trip blank  
 SW = See worksheet FB = Field blank EB = Equipment blank

Validated Samples:

1	CLJ62-A3S-11.6-BC	SOIL	11R	CLJ62-A3S-RB	AQ	21	
2	CLJ62-A3S-12.6-BC		12R	CLJ62-A2S-RB		22	
3	CLJ62-A3S-13.6-CS		13FB	CLJ62-FB		23	
4 $D_1$	CLJ62-A3S-16.6-CS		14	CLJ62-A3S-11.6-BCMS	SOIL	24	
5 $D_1$	CLJ62-A3S-16.6-CSD		15	CLJ62-A3S-11.6-BCMSD		25	
6	CLJ62-A3S-17.6-BC		16	B-P4331		26	
7	CLJ62-A3S-17.6-CS		17	B-P4330	AQ	27	
8	CLJ62-A2S-001-ZBC		18			28	
9	CLJ62-A2S-002-ZCS		19			29	
10	CLJ62-A2S-003-ZCS		20			30	

DC #: 15790  
 DG #: 4439-

VALIDATION FINDING WORKSHEET  
 Continuing Calibration

Page 1 of 2  
 Reviewer: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N" Not applicable questions are identified as "N/A".

- What type or calibration verification calculation was performed?  %D or  RPD
- N N/A Were Evaluation mix standards run before initial calibration and before samples?
- N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard ( $\leq 20.0\%$  for individual breakdowns)?
- N N/A Was at least one Individual Mix standards A and/or B run daily to verify the working curve?
- N N/A Were continuing standards analyzed at a frequency of every 10 samples to verify the working curve?
- N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of  $\leq 15.0\%$ ?
- Level IV/D Only
- N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?
- N N/A Were the percent difference (%D) results recalculated? (Please see Calibration verification results verification worksheet.)
- N N/A Were the (%D) recalculated results within 10.0% of the reported results?

#	Date	Standard ID	Column	Compound	%D / RPD (Limit $\leq 15.0$ )	RT (Limits)	Associated Samples	Qualifications
1	6-16-95	IND2AB P8675	112/110	E	22.4	( )	6-10	J/P
						( )		
						( )		
						( )		
2	6-19-95	IND2AB P8675	112/110	M	28.5	( )	1-5	
				Q	21.1	( )		
						( )		
						( )		
3	6-19-95	IND2AB P8675	112/110	K	17.8	( )	1-5	
						( )		
						( )		
						( )		
4	6-19-95	IND2AB P8675	112/110	T	15.9	( )	11-13	
				L	19.0	( )		
				O	17.2	( )		
				R	24.4	( )		
				Q	32.0	( )		
						( )		
						( )		
5	6-19-95	IND2AB P8675	112/110	O	17.6	( )	11-13	
				R	23.5	( )		
				Q	26.4	( )		
						( )		

- |              |                       |                  |                       |                    |                 |                  |             |           |
|--------------|-----------------------|------------------|-----------------------|--------------------|-----------------|------------------|-------------|-----------|
| A. Alpha BHC | E. Heptachlor         | I. Dieldrin      | M. 4,4'-DDD           | Q. Endrin ketone   | U. Toxaphene    | Y. Aroclor-1242  | CC. DB 608  | GG. _____ |
| B. Beta BHC  | F. Aldrin             | J. 4,4'-DDE      | N. Endosulfan sulfate | R. Endrin aldehyde | V. Aroclor-1016 | Z. Aroclor-1248  | DD. DB 1701 | HH. _____ |
| C. Delta BHC | G. Heptachlor epoxide | K. Endrin        | O. 4,4'-DDT           | S. Alpha chlordane | W. Aroclor-1221 | AA. Aroclor-1254 | EE. _____   | II. _____ |
| D. Gamma BHC | H. Endosulfan I       | L. Endosulfan II | P. Methoxychlor       | T. Gamma-chlordane | X. Aroclor-1232 | BB. Aroclor-1260 | FF. _____   | JJ. _____ |





LDC #: 1163  
 SDG #: 44

VALIDATION FINDINGS WORKSHEET  
 Matrix Spike/Mat Spike Duplicates

Page: 1 of 1  
 Reviewer: MD  
 2nd Reviewer: (12)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?  
 Level IV/D Only  
 Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-21-95	14, 15	ALL	%R (2 RPD)	ALL (OUT OF)	( )	ALL Soil Samples	NO QUAL.
				QC (LIMIT)	DUE (TO SAMPLE)	( )		
				DILUTION AND	SOME (COMPOUNDS)	( )		
				CONC (72X)	SPIKE (AMOUNT)	( )		
2	6-19-95	NO AQ MS/MSD	ALL	( )	( )	( )	ALL AQ Samples	NONE/P
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	48-127	≤ 50	58-123	≤ 15
B	Heptachlor	35-130	≤ 31	40-131	≤ 20
C	Aldrin	34-132	≤ 43	40-120	≤ 22
D	Dieldrin	31-134	≤ 38	52-126	≤ 18
E	Endrin	42-139	≤ 45	56-121	≤ 21
F	4,4'-DDT	23-134	≤ 50	38-127	≤ 27
G					
H					
I					
J					

LDC #: 157903  
SDG #: 44393

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 1 of 1  
Reviewer: BM  
2nd reviewer: (signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

- Y  N  N/A Were field duplicate pairs identified in this SDG?
- Y  N  N/A Were target compounds detected in this field duplicate pairs?

Compound	Concentration ( <u>µg/kg</u> )		RPD
	4	5	
4,4'-DDD	1100	1400	24

Compound	Concentration (            )		RPD

Compound	Concentration (            )		RPD

Compound	Concentration (            )		RPD

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** June 22, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG): 44479**

**Sample Identification**

CLJ62-A3S-014SCZ  
CLJ62-A2S-002SCZ  
CLJ62-A2S-002SCZD  
CLJ62-A2-RB  
CLJ62-A3-RB  
CLJ62-FB  
CLJ62-A3S-014SCZMS  
CLJ62-A3S-014SCZMSD

## Introduction

This data review covers 5 soil samples and 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient ( $r$ ) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

## VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44479.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chlorendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria.

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44479.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Sample (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
CLJ62-A3S-014SCZMS/MSD (All soil samples in SDG 44479.)	Endrin aldehyde	675 (4.55-91.83)	460 (4.55-91.83)	38 ( $\leq 30$ )	J	A
	Heptachlor	-	-	32.7 ( $\leq 31$ )	J	
	Methoxychlor	101 (44.48-94.74)	96 (44.48-94.74)	-	J (all detects)	

## VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria.

## IX. Regional Quality Assurance and Quality Control

Not applicable.

## X. Pesticide Cleanup Checks

### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

## XI. Target Compound Identification

Raw data were not checked for this SDG.

## XII. Compound Quantitation and Reported CRQLs

Raw data were not checked for this SDG.

### XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

### XIV. Field Duplicates

Samples CLJ62-A2S-002SCZ and CLJ62-A2S-002SCZD were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A2S-002SCZ	CLJ62-A2S-002SCZD	
Alpha-chlordane	260	330	24
Gamma-chlordane	280	350	22
4,4'-DDT	660	590	11
4,4'-DDE	120	150	22
4,4'-DDD	180	180	0
Heptachlor	28	33	16
Aroclor 1260	9600	11000	14

### XV. Field Blanks

Samples CLJ62-A2-RB and CLJ62-A3-RB were identified as rinsates. No chlorinated pesticide or PCB contaminants were found in the rinsates.

Sample CLJ62-FB was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44479**

SDG	Sample	Compound	Flag	A or P	Reason
44479	CLJ62-A3S-014SCZ CLJ62-A2S-002SCZ CLJ62-A2S-002SCZD CLJ62-A2-RB CLJ62-A3-RB CLJ62-FB	All TCL compounds	None	P	Surrogate spikes
44479	CLJ62-A2-RB CLJ62-A3-RB CLJ62-FB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates
44479	CLJ62-A3S-014SCZ CLJ62-A2S-002SCZ CLJ62-A2S-002SCZD	Endrin aldehyde Heptachlor Methoxychlor	J J J (all detects)	A	Matrix spike/Matrix spike duplicates (%R) (RPD)

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44479**

No Laboratory Blank Data Qualified in this SDG.

1579E

Laboratory number: 44479-001  
Sample Designation: CLJ62-A3S-014SCZ  
Date Extracted: 06/26/95  
Date Analyzed: 06/27/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 14 % , elevating the reporting limits  
by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	60
alpha-BHC	BDL	60
beta-BHC	BDL	60
gamma-BHC (Lindane)	BDL	60
delta-BHC	BDL	60
alpha-Chlordane	460	60
gamma-Chlordane	530	60
4,4'-DDT	810	100
4,4'-DDE	230	60
4,4'-DDD	400	100
Dieldrin	BDL	60
Endosulfan I	BDL	60
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	60
Endrin aldehyde	BDL	100
Heptachlor	45	60
Heptachlor Epoxide	BDL	60
PCB-1242 (Arochlor 1242)	BDL	600
PCB-1254 (Arochlor 1254)	BDL	600
PCB-1221 (Arochlor 1221)	BDL	600
PCB-1232 (Arochlor 1232)	BDL	600
PCB-1248 (Arochlor 1248)	BDL	600
PCB-1260 (Arochlor 1260)	17000	600
PCB-1016 (Arochlor 1016)	BDL	600
Toxaphene	BDL	2000
Endrin Ketone	BDL	100
Methoxychlor	BDL	600

44

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit  
J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
A



Laboratory number: 44479-002  
 Sample Designation: CLJ62-A2S-002SCZ  
 Date Extracted: 06/26/95  
 Date Analyzed: 06/27/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.17 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	60
alpha-BHC	BDL	60
beta-BHC	BDL	60
gamma-BHC (Lindane)	BDL	60
delta-BHC	BDL	60
alpha-Chlordane	260	60
gamma-Chlordane	280	60
4,4'-DDT	660	100
4,4'-DDE	120	60
4,4'-DDD	180	100
Dieldrin	BDL	60
Endosulfan I	BDL	60
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	60
Endrin aldehyde	BDL	100
Heptachlor	28 J	60 J
Heptachlor Epoxide	BDL	60
PCB-1242 (Arochlor 1242)	BDL	600
PCB-1254 (Arochlor 1254)	BDL	600
PCB-1221 (Arochlor 1221)	BDL	600
PCB-1232 (Arochlor 1232)	BDL	600
PCB-1248 (Arochlor 1248)	BDL	600
PCB-1260 (Arochlor 1260)	9600	600
PCB-1016 (Arochlor 1016)	BDL	600
Toxaphene	BDL	2000
Endrin Ketone	BDL	100
Methoxychlor	BDL	600

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 JH



Laboratory number: 44479-003  
 Sample Designation: CLJ62-A2S-002SCZD  
 Date Extracted: 06/26/95  
 Date Analyzed: 06/27/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 13 % , elevating the reporting limits  
 by a factor of 1.15 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	60
alpha-BHC	BDL	60
beta-BHC	BDL	60
gamma-BHC (Lindane)	BDL	60
delta-BHC	BDL	60
alpha-Chlordane	330	60
gamma-Chlordane	350	60
4,4'-DDT	590	100
4,4'-DDE	150	60
4,4'-DDD	180	100
Dieldrin	BDL	60
Endosulfan I	BDL	60
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	60
Endrin aldehyde	BDL	100
Heptachlor	33 J	60
Heptachlor Epoxide	BDL	60
PCB-1242 (Arochlor 1242)	BDL	600
PCB-1254 (Arochlor 1254)	BDL	600
PCB-1221 (Arochlor 1221)	BDL	600
PCB-1232 (Arochlor 1232)	BDL	600
PCB-1248 (Arochlor 1248)	BDL	600
PCB-1260 (Arochlor 1260)	11000	600
PCB-1016 (Arochlor 1016)	BDL	600
Toxaphene	BDL	2000
Endrin Ketone	BDL	100
Methoxychlor	BDL	600

44x

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 PJ

Laboratory number: 44479-004  
Sample Designation: CLJ62-A2-RB  
Date Extracted: 06/23/95  
Date Analyzed: 06/27/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.06
alpha-BHC	BDL	0.06
beta-BHC	BDL	0.06
gamma-BHC (Lindane)	BDL	0.06
delta-BHC	BDL	0.06
alpha-Chlordane	BDL	0.06
gamma-Chlordane	BDL	0.06
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.06
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.06
Endosulfan I	BDL	0.06
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.06
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.06
Heptachlor Epoxide	BDL	0.06
PCB-1242 (Arochlor 1242)	BDL	0.6
PCB-1254 (Arochlor 1254)	BDL	0.6
PCB-1221 (Arochlor 1221)	BDL	0.6
PCB-1232 (Arochlor 1232)	BDL	0.6
PCB-1248 (Arochlor 1248)	BDL	0.6
PCB-1260 (Arochlor 1260)	BDL	0.6
PCB-1016 (Arochlor 1016)	BDL	0.6
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.6

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/22/95  
H

Laboratory number: 44479-005  
Sample Designation: CLJ62-A3-RB  
Date Extracted: 06/23/95  
Date Analyzed: 06/27/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.06
alpha-BHC	BDL	0.06
beta-BHC	BDL	0.06
gamma-BHC (Lindane)	BDL	0.06
delta-BHC	BDL	0.06
alpha-Chlordane	BDL	0.06
gamma-Chlordane	BDL	0.06
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.06
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.06
Endosulfan I	BDL	0.06
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.06
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.06
Heptachlor Epoxide	BDL	0.06
PCB-1242 (Arochlor 1242)	BDL	0.6
PCB-1254 (Arochlor 1254)	BDL	0.6
PCB-1221 (Arochlor 1221)	BDL	0.6
PCB-1232 (Arochlor 1232)	BDL	0.6
PCB-1248 (Arochlor 1248)	BDL	0.6
PCB-1260 (Arochlor 1260)	BDL	0.6
PCB-1016 (Arochlor 1016)	BDL	0.6
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.6

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/22/95  
PT

**pace**  
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00000000

Laboratory number: 44479-006  
Sample Designation: CLJ62-FB  
Date Extracted: 06/23/95  
Date Analyzed: 06/28/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.06
alpha-BHC	BDL	0.06
beta-BHC	BDL	0.06
gamma-BHC (Lindane)	BDL	0.06
delta-BHC	BDL	0.06
alpha-Chlordane	BDL	0.06
gamma-Chlordane	BDL	0.06
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.06
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.06
Endosulfan I	BDL	0.06
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.06
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.06
Heptachlor Epoxide	BDL	0.06
PCB-1242 (Arochlor 1242)	BDL	0.6
PCB-1254 (Arochlor 1254)	BDL	0.6
PCB-1221 (Arochlor 1221)	BDL	0.6
PCB-1232 (Arochlor 1232)	BDL	0.6
PCB-1248 (Arochlor 1248)	BDL	0.6
PCB-1260 (Arochlor 1260)	BDL	0.6
PCB-1016 (Arochlor 1016)	BDL	0.6
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.6

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/22/98  
HJ

LDC #: 1579E3 **VALIDATION COMPLETENESS WORKSHEET**  
 SDG #: 44479 EPA Level III X NEESA Level C  
 Laboratory: Pace, Inc.

Date: 9-13-95  
 Page: 1 of 1  
 Reviewer: MM  
 2nd Reviewer: SA

METHOD: GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-22-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	r 70.995
IV.	Continuing calibration	A	%D
V.	Blanks	A	
VI.	Surrogate spikes	SWA	11.875
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D <sub>i</sub> = 2, 3
XV.	Field blanks	ND	R = 4, 5    EB = 6

Note: A = Acceptable                      ND = No compounds detected                      D = Duplicate  
 N = Not provided/applicable                      R = Rinsete                      TB = Trip blank  
 SW = See worksheet                      FB = Field blank                      EB = Equipment blank

Validated Samples:

1	CLJ62-A3S-014SCZ	SOIL	11	21
2 D <sub>i</sub>	CLJ62-A2S-002SCZ	↓	12	22
3 D <sub>i</sub>	CLJ62-A2S-002SCZD	↓	13	23
4 R	CLJ62-A2-RB	AQ	14	24
5 R	CLJ62-A3-RB	↓	15	25
6 FB	CLJ62-FB	↓	16	26
7	CLJ62-A3S-014SCZMS	SOIL	17	27
8	CLJ62-A3S-014SCZMSD	↓	18	28
9	B-P4339	↓	19	29
10	B-P4338	AQ	20	30

LDC #: 11-13  
 SDG #: 2119

VALIDATION FINISHES WORKSHEET  
Surrogate Spikes

Page 1 of 1  
 Reviewer: MA  
 2nd Reviewer: (Signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Were surrogates spiked into all samples, standards and blanks?
- N N/A Did all surrogate percent recoveries (%R) meet the QC limits stated below?

#	Date	Sample ID	Column	Surrogate Compound	%R (Limits)	Qualifications
1		DIBUTYL CHLOROPHOSPHATE SPECIALS MS SURROGATE IN QUAPP.			( )	NONE/P
					ALL SAMPLES	
		TETRACHLOROETHYLENE AND 1,1,1,2-TETRACHLOROETHANE SURROGATES.		DICHLOROBENZENE	( )	+ BLANKS
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	

Letter Designation	Surrogate Compound	Recovery QC Limits (Soil)	Recovery QC Limits (Water)	Comments
A				
B				

LDC #: 157963  
SDG #: 9

VALIDATION FINISHING WORKSHEET  
Matrix Spike/Main Spike Duplicates

Page: 1 of 2  
Reviewer: [Signature]  
2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?

Level IV/D Only

- Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-28-95	7, 8	G	NC (30.36-94.07)	16 (30.36-94.07)	NC (≤ 30)	All Soil Samples	NO QUAL.
		SAMPLE CONC. > 2X	F	519 (23-134)	310 (32.81-111.17)	50.9 (≤ 30)		
		SPIKE AMT.	I	( <del>22.81-111.17</del> 23-134)	17 (24.59-111.17)	122 (≤ 30)		
				( )	( )	( )		
2	6-28-95	7, 8	H	675 (4.55-91.83)	460 (4.55-91.83)	38 (≤ 30)	All Soil Samples	J/A
			B	(31-134)	(31-134)	32.7 (≤ 30)		
		on 1-26-95	D	112 (33.19-93.39)	101 (32.81-93.39)	( )		J/A (DETAILS)
			E	117 (32.96-104.90)	( )	( )		
3	6-28-95	No AQ MS/MSD	ALL	(42-139)	( )	( )	All AQ Samples	None/P
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	46-127	≤ 50		
B	Heptachlor	35-130	≤ 30		
C	Aldrin	39-132	≤ 43		
D	Dieldrin	31-139 33.19-93.39	≤ 38		
E	Endrin	42-139 32.96-104.90	≤ 45		
F	4,4'-DDT	23-134 32.81-111.17	≤ 30		
G	4,4'-DDD	30.36-94.07	≤ 30		
H	Endrin aldehyde	4.55-91.83	≤ 30		
I	4,4'-DDE	24.59-111.17	≤ 30		
J	Methoxychlor	44.48-94.74	≤ 30		

NC = Not Calculable due to Dilution

**VALIDATION FINANCIAL WORKSHEET**  
**Matrix Spike/Matrix spike Duplicates**

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y  N  N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y  N  N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y  N  N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?  
**Level IV/D Only**  
 Y  N  N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y  N  N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	6-28-95	7.8	J	101(99.98-99.74)	96(99.98-99.74)	( )	All soil samples	J/A (Det.)
2		(cont.)		( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC				
B	Heptachlor				
C	Aldrin				
D	Dieldrin				
E	Endrin				
F	4,4'-DDT				
G	<del>Heptachlor</del>				
H					
I					
J	Methoxychlor	44.98 - 99.74	530		

LDC #: 1579 E3  
 SDG #: 44479

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 1 of 1  
 Reviewer: DM  
 2nd reviewer: (Signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

N N/A Were field duplicate pairs identified in this SDG?  
Y N/A Were target compounds detected in this field duplicate pairs?

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	2	3	
<i>a-Chlordane</i>	260	330	24
<i>g-Chlordane</i>	280	350	22
<i>4,4'-DDT</i>	660	590	11
<i>4,4'-DDE</i>	120	150	22
<i>4,4'-DDD</i>	180	180	0

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	2	3	
<i>Heptachlor</i>	28	33	16
<i>PCB-1260</i>	9600	11000	14

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** June 29, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG):** 44544

**Sample Identification**

CLJ62-A3S-005.1SC  
CLJ62-A3S-010.1SC  
CLJ62-A3S-005.1BC  
CLJ62-A3S-005.1BCD  
CLJ62-A3S-005.1BCDRE  
CLJ62-A3S-003.1BC  
CLJ62-A3S-003.1BCRDL  
CLJ62-A3S-003.1BCRE\*  
CLJ62-A3S-008.1SC  
CLJ62-A3S-008.1SCRDL  
CLJ62-A3S-008.1SCRE\*  
CLJ62-A3S-FB  
CLJ62-A3S-005.1BCDMS  
CLJ62-A3S-005.1BCDMSD

\* Indicates PCBs only

## Introduction

This data review covers 13 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient ( $r$ ) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits with the following exceptions:

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8688	112/110	Endrin ketone	20.6	CLW62-A3S-005.1SC CLW62-A3S-003.1BC CLW62-A3S-008.1SC B-P4346	J	P
IND2AB P8688	112/110	Endrin Endrin aldehyde	15.2 16.6	CLW62-A3S-005.1SC CLW62-A3S-003.1BC CLW62-A3S-008.1SC B-P4346	J J	P
IND2AB P8688	112/110	Endrin ketone	18.5	CLW62-A3S-010.1SC CLW62-A3S-005.1BC CLW62-A3S-005.1BCD CLW62-A3S-003.1BC CLW62-A3S-008.1SCRDL CLW62-A3S-FB	J	P
IND2AB P8688	112/110	Endrin ketone	15.3	CLW62-A3S-010.1SC CLW62-A3S-005.1BC CLW62-A3S-005.1BCD CLW62-A3S-003.1BC CLW62-A3S-008.1SCRDL CLW62-A3S-FB	J	P

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8688	112/110	Endosulfan II Endrin aldehyde Endrin ketone	15.6 15.9 23.4	CLJ62-A3S-005.1BCDRE B-P4347	J J J	P
IND2AB P8688	112/110	Endrin aldehyde Endrin ketone	18.6 19.3	CLJ62-A3S-005.1BCDRE B-P4347	J J	P
IND2AB P8688	112/110	4,4'-DDT	40.5	B-P4355	J	P
IND2AB P8688	112/110	4,4'-DDD 4,4'-DDT Methoxychlor	15.1 39.5 30.0	CLJ62-A3S-003.1BCRE* CLJ62-A3S-008.1SCRE*	J J J	P
IND2AB P8688	112/110	4,4'-DDD 4,4'-DDT Methoxychlor/Endosulfan sulfate	23.7 35.6 20.0	CLJ62-A3S-003.1BCRE* CLJ62-A3S-008.1SCRE*	J J J	P

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

## VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44544.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chlarendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria with the following exceptions:

Sample	Column	Surrogate	%R (Limits)	Compound	Flag	A or P
CLJ62-A3S-FB	112/110	Decachlorobiphenyl	17 (20-150)	All TCL compounds	J	A
B-P4347	112/110	Decachlorobiphenyl	17 (20-150)	All TCL compounds	J	A

## VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44544.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Sample (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
CLJ62-A3S-005.1BCDMS/MSD (All soil samples in SDG 44544).	Methoxychlor	43 (44.48-94.74)	-	-	J	A

## VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
LSP4355	Endosulfan I	36 (37.15-91.67)	CLJ62-A3S-005.1BCDRE B-P4355	J	A

## IX. Regional Quality Assurance and Quality Control

Not applicable.

## X. Pesticide Cleanup Checks

### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

### **XI. Target Compound Identification**

Raw data were not checked for this SDG.

### **XII. Compound Quantitation and Reported CRQLs**

Raw data were not checked for this SDG.

### **XIII. Overall Assessment of Data**

Data flags are summarized at the end of this report.

### **XIV. Field Duplicates**

Samples CLJ62-A3S-005.1BC and CLJ62-A3S-005.1BCD were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-005.1BC	CLJ62-A3S-005.1BCD	
4,4'-DDT	170	150	13
4,4'-DDE	140	92	41
4,4'-DDD	1500	890	51
Alpha-chlordane	ND	37	Not calculable
Gamma-chlordane	ND	34	Not calculable

### **XV. Field Blanks**

Sample CLJ62-A3S-FB was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44544**

SDG	Sample	Compound	Flag	A or P	Reason
44544	CLJ62-A3S-005.1SC CLJ62-A3S-003.1BC CLJ62-A3S-008.1SC CLJ62-A3S-010.1SC CLJ62-A3S-005.1BC CLJ62-A3S-005.1BCD CLJ62-A3S-003.1BC CLJ62-A3S-008.1SCRDL CLJ62-A3S-FB	Endrin ketone	J	P	Continuing calibration (%D)
44544	CLJ62-A3S-005.1SC CLJ62-A3S-003.1BC CLJ62-A3S-008.1SC	Endrin Endrin aldehyde	J J	P	Continuing calibration (%D)
44544	CLJ62-A3S-005.1BCORE	Endosulfan II Endrin aldehyde Endrin ketone	J J J	P	Continuing calibration (%D)
44544	CLJ62-A3S-005.1BCDRE	Endrin aldehyde Endrin ketone	J J	P	Continuing calibration (%D)
44544	CLJ62-A3S-003.1BCRE* CLJ62-A3S-008.1SCRE*	4,4'-DDD 4,4'-DDT Methoxychlor	J J J	P	Continuing calibration (%D)
44544	CLJ62-A3S-003.1BCRE* CLJ62-A3S-008.1SCRE*	4,4'-DDD 4,4'-DDT Methoxychlor Endosulfan sulfate	J J J J	P	Continuing calibration (%D)
44544	CLJ62-A3S-005.1SC CLJ62-A3S-010.1SC CLJ62-A3S-005.1BC CLJ62-A3S-005.1BCD CLJ62-A3S-005.1BCDRE CLJ62-A3S-003.1BC CLJ62-A3S-003.1BCRDL CLJ62-A3S-003.1BCRE* CLJ62-A3S-008.1SC CLJ62-A3S-008.1SCRDL CLJ62-A3S-008.1SCRE* CLJ62-A3S-FB	All TCL compounds	None	P	Surrogate spikes
44544	CLJ62-A3S-FB	All TCL compounds	J	A	Surrogate spikes (%R)
44544	CLJ62-A3S-FB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

SDG	Sample	Compound	Flag	A or P	Reason
44544	CLJ62-A3S-005.1SC CLJ62-A3S-010.1SC CLJ62-A3S-005.1BC CLJ62-A3S-005.1BCD CLJ62-A3S-005.1BCDRE CLJ62-A3S-003.1BC CLJ62-A3S-003.1BCRD CLJ62-A3S-003.1BCRE* CLJ62-A3S-008.1SC CLJ62-A3S-008.1SCRDL CLJ62-A3S-008.1SCRE*	Methoxychlor	J	A	Matrix spike/Matrix spike duplicates (%R)
44544	CLJ62-A3S-005.1BCDRE	Endosulfan I	J	A	Laboratory control samples (%R)

Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44544

No Laboratory Blank Data Qualified in this SDG.

1579 F

Laboratory number: 44544-001  
Sample Designation: CLJ62-A3S-005.1SC  
Date Extracted: 06/30/95  
Date Analyzed: 06/30/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 9 % , elevating the reporting limits  
by a factor of 1.1 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	10
alpha-BHC	BDL	10
beta-BHC	BDL	10
gamma-BHC (Lindane)	BDL	10
delta-BHC	BDL	10
alpha-Chlordane	16	10
gamma-Chlordane	16	10
4,4'-DDT	42	20
4,4'-DDE	22	10
4,4'-DDD	160	20
Dieldrin	BDL	10
Endosulfan I	BDL	10
Endosulfan II	BDL	20
Endosulfan sulfate	BDL	20
Endrin	BDL	10 J
Endrin aldehyde	BDL	20 J
Heptachlor	BDL	10
Heptachlor Epoxide	BDL	10
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	BDL	100
PCB-1016 (Arochlor 1016)	BDL	100
Toxaphene	BDL	400
Endrin Ketone	BDL	20 J
Methoxychlor	BDL	100 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
H



Laboratory number: 44544-002  
 Sample Designation: CLJ62-A3S-010.1SC  
 Date Extracted: 06/30/95  
 Date Analyzed: 07/05/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 11 % , elevating the reporting limits  
 by a factor of 1.12 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	20
alpha-BHC	BDL	20
beta-BHC	BDL	20
gamma-BHC (Lindane)	BDL	20
delta-BHC	BDL	20
alpha-Chlordane	170	20
gamma-Chlordane	170	20
4,4'-DDT	68	40
4,4'-DDE	94	20
4,4'-DDD	170	40
Dieldrin	BDL	20
Endosulfan I	BDL	20
Endosulfan II	BDL	40
Endosulfan sulfate	BDL	40
Endrin	BDL	20
Endrin aldehyde	BDL	40
Heptachlor	BDL	20
Heptachlor Epoxide	BDL	20
PCB-1242 (Arochlor 1242)	BDL	200
PCB-1254 (Arochlor 1254)	BDL	200
PCB-1221 (Arochlor 1221)	BDL	200
PCB-1232 (Arochlor 1232)	BDL	200
PCB-1248 (Arochlor 1248)	BDL	200
PCB-1260 (Arochlor 1260)	BDL	200
PCB-1016 (Arochlor 1016)	BDL	200
Toxaphene	BDL	900
Endrin Ketone	BDL	40 J
Methoxychlor	BDL	200 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 PJ



Laboratory number: 44544-003  
 Sample Designation: CLJ62-A3S-005.1BC  
 Date Extracted: 06/30/95  
 Date Analyzed: 07/05/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 11 % , elevating the reporting limits  
 by a factor of 1.13 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	100
alpha-BHC	BDL	100
beta-BHC	BDL	100
gamma-BHC (Lindane)	BDL	100
delta-BHC	BDL	100
alpha-Chlordane	BDL	100
gamma-Chlordane	BDL	100
4,4'-DDT	170	J 200
4,4'-DDE	140	100
4,4'-DDD	1500	200
Dieldrin	BDL	100
Endosulfan I	BDL	100
Endosulfan II	BDL	200
Endosulfan sulfate	BDL	200
Endrin	BDL	100
Endrin aldehyde	BDL	200
Heptachlor	BDL	100
Heptachlor Epoxide	BDL	100
PCB-1242 (Arochlor 1242)	BDL	1000
PCB-1254 (Arochlor 1254)	BDL	1000
PCB-1221 (Arochlor 1221)	BDL	1000
PCB-1232 (Arochlor 1232)	BDL	1000
PCB-1248 (Arochlor 1248)	BDL	1000
PCB-1260 (Arochlor 1260)	BDL	1000
PCB-1016 (Arochlor 1016)	BDL	1000
Toxaphene	BDL	4000
Endrin Ketone	BDL	200 J
Methoxychlor	BDL	1000 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 JL



Laboratory number: 44544-004  
 Sample Designation: CLJ62-A3S-005.1BCD  
 Date Extracted: 06/30/95  
 Date Analyzed: 07/05/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 10 % , elevating the reporting limits  
 by a factor of 1.11 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	60
alpha-BHC	BDL	60
beta-BHC	BDL	60
gamma-BHC (Lindane)	BDL	60
delta-BHC	BDL	60
alpha-Chlordane	37	J 60
gamma-Chlordane	34	J 60
4,4'-DDT	150	100
4,4'-DDE	92	60
4,4'-DDD	890	100
Dieldrin	BDL	60
Endosulfan I	BDL	60
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	60
Endrin aldehyde	BDL	100
Heptachlor	BDL	60
Heptachlor Epoxide	BDL	60
PCB-1242 (Arochlor 1242)	BDL	600
PCB-1254 (Arochlor 1254)	BDL	600
PCB-1221 (Arochlor 1221)	BDL	600
PCB-1232 (Arochlor 1232)	BDL	600
PCB-1248 (Arochlor 1248)	BDL	600
PCB-1260 (Arochlor 1260)	BDL	600
PCB-1016 (Arochlor 1016)	BDL	600
Toxaphene	BDL	2000
Endrin Ketone	BDL	100
Methoxychlor	BDL	600

151

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 PL

Laboratory number: 44544-004RE  
 Sample Designation: CLJ62-A3S-005.1BCD  
 Date Extracted: 07/06/95  
 Date Analyzed: 07/06/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 10 % , elevating the reporting limits  
 by a factor of 1.11 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	60
alpha-BHC	BDL	60
beta-BHC	BDL	60
gamma-BHC (Lindane)	BDL	60
delta-BHC	BDL	60
alpha-Chlordane	54 J	60
gamma-Chlordane	55 J	60
4,4'-DDT	190	100
4,4'-DDE	91	60
4,4'-DDD	860	100
Dieldrin	BDL	60
Endosulfan I	BDL	60
Endosulfan II	BDL	100
Endosulfan sulfate	BDL	100
Endrin	BDL	60
Endrin aldehyde	BDL	100
Heptachlor	BDL	60
Heptachlor Epoxide	BDL	60
PCB-1242 (Arochlor 1242)	BDL	600
PCB-1254 (Arochlor 1254)	BDL	600
PCB-1221 (Arochlor 1221)	BDL	600
PCB-1232 (Arochlor 1232)	BDL	600
PCB-1248 (Arochlor 1248)	BDL	600
PCB-1260 (Arochlor 1260)	BDL	600
PCB-1016 (Arochlor 1016)	BDL	600
Toxaphene	BDL	2000
Endrin Ketone	BDL	100
Methoxychlor	BDL	600

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 A



Laboratory number: 44544-005  
Sample Designation: CLJ62-A3S-003.1BC  
Date Extracted: 06/30/95  
Date Analyzed: 06/30/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 14 % , elevating the reporting limits  
by a factor of 1.16 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	400	100
PCB-1016 (Arochlor 1016)	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
LA

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

Laboratory number: 44544-005DL  
 Sample Designation: CLJ62-A3S-003.1BC  
 Date Extracted: 06/30/95  
 Date Analyzed: 07/05/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	200
alpha-BHC	BDL	200
beta-BHC	BDL	200
gamma-BHC (Lindane)	BDL	200
delta-BHC	BDL	200
alpha-Chlordane	1600	200
gamma-Chlordane	1600	200
4,4'-DDT	380	J 400
4,4'-DDE	380	200
4,4'-DDD	570	400
Dieldrin	BDL	200
Endosulfan I	BDL	200
Endosulfan II	BDL	400
Endosulfan sulfate	BDL	400
Endrin	BDL	200 J
Endrin aldehyde	BDL	400 J
Heptachlor	BDL	200
Heptachlor Epoxide	BDL	200
Toxaphene	BDL	9000
Endrin Ketone	BDL	400 J
Methoxychlor	BDL	2000 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range. Detection limits  
 were elevated accordingly.

9/22/95  
 H



Laboratory number: 44544-005RDL  
 Sample Designation: CLJ62-A3S-003.1BC  
 Date Extracted: 07/07/95  
 Date Analyzed: 07/10/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	200
alpha-BHC	BDL	200
beta-BHC	BDL	200
gamma-BHC (Lindane)	BDL	200
delta-BHC	BDL	200
alpha-Chlordane	1400	200
gamma-Chlordane	1400	200
4,4'-DDT	260	400 J
4,4'-DDE	410	200
4,4'-DDD	390	400 J
Dieldrin	BDL	200
Endosulfan I	BDL	200
Endosulfan II	BDL	400
Endosulfan sulfate	BDL	400 J
Endrin	BDL	200
Endrin aldehyde	BDL	400
Heptachlor	BDL	200
Heptachlor Epoxide	BDL	200
PCB-1242 (Arochlor 1242)	BDL	2000
PCB-1254 (Arochlor 1254)	BDL	2000
PCB-1221 (Arochlor 1221)	BDL	2000
PCB-1232 (Arochlor 1232)	BDL	2000
PCB-1248 (Arochlor 1248)	BDL	2000
PCB-1260 (Arochlor 1260)	BDL	2000
PCB-1016 (Arochlor 1016)	BDL	2000
Toxaphene	BDL	8000
Endrin Ketone	BDL	400
Methoxychlor	BDL	2000 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range. Detection limits  
 were elevated accordingly.

7/22/95  
 P

Laboratory number: 44544-005RE  
Sample Designation: CLJ62-A3S-003.1BC  
Date Extracted: 07/07/95  
Date Analyzed: 07/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 14 % , elevating the reporting limits  
by a factor of 1.16 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	170	100
PCB-1016 (Arochlor 1016)	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
H

**pace**  
INCORPORATED  
THE ASSURANCE OF QUALITY

Laboratory number: 44544-006  
Sample Designation: CLJ62-A3S-008.1SC  
Date Extracted: 06/30/95  
Date Analyzed: 06/30/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 19 % , elevating the reporting limits  
by a factor of 1.24 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	2300	100
PCB-1016 (Arochlor 1016)	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
#1

Laboratory number: 44544-006DL  
 Sample Designation: CLJ62-A3S-008.1SC  
 Date Extracted: 06/30/95  
 Date Analyzed: 07/05/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 19 % , elevating the reporting limits  
 by a factor of 1.24 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	600
alpha-BHC	BDL	600
beta-BHC	BDL	600
gamma-BHC (Lindane)	BDL	600
delta-BHC	BDL	600
alpha-Chlordane	2100	600
gamma-Chlordane	2600	600
4,4'-DDT	1300	1000
4,4'-DDE	1400	600
4,4'-DDD	750 J	1000
Dieldrin	BDL	600
Endosulfan I	BDL	600
Endosulfan II	BDL	1000
Endosulfan sulfate	BDL	1000
Endrin	BDL	600 J
Endrin aldehyde	BDL	1000 J
Heptachlor	BDL	600
Heptachlor Epoxide	BDL	600
Toxaphene	BDL	20000
Endrin Ketone	BDL	1000
Methoxychlor	BDL	6000 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range. Detection limits  
 were elevated accordingly.

9/22/95  
 ps



Laboratory number: 44544-006RDL  
 Sample Designation: CLJ62-A3S-008.1SC  
 Date Extracted: 07/07/95  
 Date Analyzed: 07/10/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 19 % , elevating the reporting limits  
 by a factor of 1.24 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	600
alpha-BHC	BDL	600
beta-BHC	BDL	600
gamma-BHC (Lindane)	BDL	600
delta-BHC	BDL	600
alpha-Chlordane	1400	600
gamma-Chlordane	1700	600
4,4'-DDT	1400	1000 J
4,4'-DDE	1000	600
4,4'-DDD	670 J	1000 J
Dieldrin	BDL	600
Endosulfan I	BDL	600
Endosulfan II	BDL	1000
Endosulfan sulfate	BDL	1000 J
Endrin	BDL	600
Endrin aldehyde	BDL	1000
Heptachlor	BDL	600
Heptachlor Epoxide	BDL	600
PCB-1242 (Arochlor 1242)	BDL	6000
PCB-1254 (Arochlor 1254)	BDL	6000
PCB-1221 (Arochlor 1221)	BDL	6000
PCB-1232 (Arochlor 1232)	BDL	6000
PCB-1248 (Arochlor 1248)	BDL	6000
PCB-1260 (Arochlor 1260)	BDL	6000
PCB-1016 (Arochlor 1016)	BDL	6000
Toxaphene	BDL	20000
Endrin Ketone	BDL	1000 J
Methoxychlor	BDL	6000 J

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit.

This sample required dilution to bring a high target analyte  
 concentration into the calibration range. Detection limits were  
 elevated accordingly.

9/22/95  
 R



Laboratory number: 44544-006RE  
Sample Designation: CLJ62-A3S-008.1SC  
Date Extracted: 07/07/95  
Date Analyzed: 07/10/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 19 % , elevating the reporting limits  
by a factor of 1.24 .

PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
PCB-1242 (Arochlor 1242)	BDL	100
PCB-1254 (Arochlor 1254)	BDL	100
PCB-1221 (Arochlor 1221)	BDL	100
PCB-1232 (Arochlor 1232)	BDL	100
PCB-1248 (Arochlor 1248)	BDL	100
PCB-1260 (Arochlor 1260)	1600	100
PCB-1016 (Arochlor 1016)	BDL	100

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit

9/22/95  
H

Laboratory number: 44544-007  
Sample Designation: CLJ62-A3S-FB  
Date Extracted: 06/30/95  
Date Analyzed: 07/05/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1 J
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

METHOD: GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6-29-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	r > 0.995
IV.	Continuing calibration	SW	%D
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D <sub>i</sub> = 3.9
XV.	Field blanks	NO	FB=12

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinseate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank

Validated Samples:

1	CLJ62-A3S-005.1SC	Soil	11	CLJ62-A3S-008.1SCRE*	Soil	21	
2	CLJ62-A3S-010.1SC		12FB	CLJ62-A3S-FB	AQ	22	
3 D <sub>i</sub>	CLJ62-A3S-005.1BC		13	CLJ62-A3S-005.1BCDMS	Soil	23	
4 D <sub>i</sub>	CLJ62-A3S-005.1BCD		14	CLJ62-A3S-005.1BCDMSD		24	
5	CLJ62-A3S-005.1BCDRE		15	B-P 4346		25	
6	CLJ62-A3S-003.1BC		16	B-P 4355		26	
7	CLJ62-A3S-003.1BCRDL		17	B-P 4356	↓	27	
8	CLJ62-A3S-003.1BCRE*		18	B-P 4347	AQ	28	
	CLJ62-A3S-008.1SC		19			29	
10	CLJ62-A3S-008.1SCRDL	↓	20			30	

\* = PCBs only

DC # 1517F  
 SDG #: 454

VALIDATION FINDING WORKSHEET  
 Continuing Calibration

Page 1 of 2  
 Review JM  
 2nd Reviewer: (Signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N" Not applicable questions are identified as "N/A".

- N N/A What type or calibration verification calculation was performed?  %D or  RPD
- N N/A Were Evaluation mix standards run before initial calibration and before samples?
- N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard ( $\leq 20.0\%$  for individual breakdowns)?
- N N/A Was at least one Individual Mix standards A and/or B run daily to verify the working curve?
- N N/A Were continuing standards analyzed at a frequency of every 10 samples to verify the working curve?
- N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of  $\leq 15.0\%$ ?
- Level IV/D Only
- N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?
- N N/A Were the percent difference (%D) results recalculated? (Please see Calibration verification results verification worksheet.)
- N N/A Were the (%D) recalculated results within 10.0% of the reported results?

#	Date	Standard ID	Column	Compound	%D / RPD (Limit $\leq 15.0$ )	RT (Limits)	Associated Samples	Qualifications
1	6-30-95	IND 2AB P8688	112/110	Q	20.6	( )	1, 6, 9, 15	J/P
						( )		
2	6-30-95	IND 2AB P8688	112/110	K	15.2	( )	1, 6, 9, 15	
	↓	↓	↓	R	16.6	( )		
						( )		
						( )		
3	7-5-95	IND 2AB P8688	112/110	Q	18.5	( )	2-4, 6, 10, 12	
						( )		
4	7-5-95	IND 2AB P8688	112/110	Q	15.3	( )	2-4, 6, 10, 12	
						( )		
5	7-6-95	IND 2AB P8688	112/110	L	15.6	( )	5, 18	
	↓	↓	↓	R	15.9	( )		
				Q	23.9	( )		
						( )		
6	7-6-95	IND 2AB P8688	112/110	R	18.6	( )	5, 18	
	↓	↓	↓	Q	19.3	( )		
						( )		
7	7-13-95	IND 2AB P8688	112/110	O	40.5	( )	16	↓
						( )		
						( )		
						( )		

- |              |                       |                  |                       |                    |                 |                  |             |           |
|--------------|-----------------------|------------------|-----------------------|--------------------|-----------------|------------------|-------------|-----------|
| A. Alpha BHC | E. Heptachlor         | I. Dieldrin      | M. 4,4' DDD           | Q. Endrin ketone   | U. Toxaphene    | Y. Aroclor-1242  | CC. DB 608  | GG. _____ |
| B. Beta BHC  | F. Aldrin             | J. 4,4'-DDE      | N. Endosulfan sulfate | R. Endrin aldehyde | V. Aroclor-1018 | Z. Aroclor-1248  | DD. DB 1701 | HH. _____ |
| C. Delta BHC | G. Heptachlor epoxide | K. Endrin        | O. 4,4'-DDT           | S. Alpha chlordane | W. Aroclor-1221 | AA. Aroclor-1254 | EE. _____   | II. _____ |
| D. Gamma BHC | H. Endosulfan I       | L. Endosulfan II | P. Methoxychlor       | T. Gamma-chlordane | X. Aroclor-1232 | BB. Aroclor-1260 | FF. _____   | JJ. _____ |



LDC #: 1579  
 SDG #: 445

VALIDATION FINDINGS WORKSHEET  
 Surrogate Spikes

Page: 1 of 1  
 Reviewer: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Were surrogates spiked into all samples, standards and blanks?
- N N/A Did all surrogate percent recoveries (%R) meet the QC limits stated below?

#	Date	Sample ID	Column	Surrogate Compound	%R (Limits)	Qualifications
1	7-5-95	12	112/110	B	17 ( 20-150 )	J/A
2	7-6-95	18	112/110	B	17 ( 20-150 )	↓
3		DIBUTYL CHLOROPHOSPHATE SPECIFIED AS SURROGATE IN QAPP.			( )	NONE/P
		TETRACHLOROMETAXYLENE AND DIBROMOBENZENE USED AS SURROGATES.			( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	

Letter Designation	Surrogate Compound	Recovery QC Limits (Soil)	Recovery QC Limits (Water)	Comments
A	TCX		20-150	
B	PCB		20-150	

LDC #: 1579 F3  
 SDG #: 4 4

**VALIDATION FINDINGS WORKSHEET**  
**Matrix Spike/Main Spike Duplicates**

Page: 1 of 1  
 Reviewer: DT  
 2nd Reviewer: (B)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?  
 Level IV/D Only  
 Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS <sup>27-119</sup> %R (Limits)	MSD <sup>328 HKT</sup> %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	7-13-95	13, 14	F	27 (27-119)	8.9 (8.9-22-119)	103 (50-50)	ALL SOIL SAMPLES	NO QUAL
		SAMPLE CONC. 72X	G	NC (30.36-94.07)	152 (30.36-94.07)	NC (30)		
		SPIKED AMOUNT		( )	( )	( )		
				( )	( )	( )		
2	7-5-95	NO AQ MS/MSD	ALL	( )	( )	( )	ALL AQ SAMPLES	NONE/P
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
3	7-13-95	13, 14	H	43 (44.48-94.71)	( )	( )	ALL SOIL SAMPLES	J/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	46-127	≤ 50	56-123	≤ 15
B	Heptachlor	35-130	≤ 31	40-131	≤ 20
C	Aldrin	34-132	≤ 43	40-120	≤ 22
D	Dieldrin	31-134	≤ 38	52-126	≤ 18
E	Endrin	42-139	≤ 45	56-121	≤ 21
F	4,4'-DDT	23-134	≤ 50	38-127	≤ 27
G	4,4'-DDD	30.36-94.07	≤ 70	32.55-95.12	≤ 30
H	METHOXY CHLOR	44.48-94.74	≤ 30	50.56-104.71	≤ 30
I					
J					



LDC #: 1571F3  
 SDG #: 44584

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 1 of 1  
 Reviewer: DM  
 2nd reviewer: (S)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

- N N/A Were field duplicate pairs identified in this SDG?
- N N/A Were target compounds detected in this field duplicate pairs?

Compound	Concentration ( <u>µg/kg</u> )		RPD
	3	4	
4,4'-DDT	170	150	13
4,4'-DDE	140	92	41
4,4'-DDD	1500	890	51
α-Chlordane	ND	37	NC
γ-Chlordane	ND	39	NC

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** July 12, 1995  
**LDC Report Date:** September 22, 1995  
**Matrix:** Soil/Water  
**Parameters:** Chlorinated Pesticides and PCBs  
**Laboratory:** Pace, Inc.

**Sample Delivery Group (SDG):** 44626

**Sample Identification**

CLJ62-A3S-003.2BCD  
CLJ62-A3S-003.2BC  
CLJ62-A3S-008.2SC  
FB  
RB  
CLJ62-A3S-008.2SCMS  
CLJ62-A3S-008.2SCMSD

## Introduction

This data review covers 5 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Chlorinated Pesticides and PCBs.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not checked for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## I. Technical Holding Times

All technical holding time requirements were met.

## II. GC/ECD Instrument Performance Check

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## III. Initial Calibration

Initial calibration of single and multicomponent analytes was performed for the primary (quantitation) column as required by EPA SW 846 Method 8080. Initial calibration of analytes requiring confirmation was performed for the confirmation column as required by this method.

A curve fit, based on the initial calibration, was established for quantitation. The correlation coefficient (r) was greater than or equal to 0.995.

## IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits with the following exceptions:

Standard ID	Column	Compound	%D	Associated Samples	Flag	A or P
IND2AB P8688	112/110	4,4'-DDT	40.5	CLJ62-A3S-003.2BCD CLJ62-A3S-003.2BC CLJ62-A3S-008.2SC FB RB	J	P
IND2AB P8688	112/110	Endrin aldehyde	16.8	B-P4360 B-P4359	J	P
IND2AB P8688	112/110	Gamma-BHC Heptachlor 4,4'-DDT Methoxychlor/Endosulfan sulfate	16.7 21.9 36.8 17.8	B-P4360 B-P4359	J J J J	P
IND2AB P8688	112/110	Gamma-BHC Beta-BHC 4,4'-DDD Endrin aldehyde	15.3 16.3 19.2 16.0	CLJ62-A3S-008.2SCMS CLJ62-A3S-008.2SCMSD	J J J J	P
IND2AB P8688	112/110	Aldrin 4,4'-DDT	15.1 37.7	CLJ62-A3S-008.2SCMS CLJ62-A3S-008.2SCMSD	J J	P

The individual 4,4'-DDT and Endrin breakdowns were less than 20.0%.

### V. Blanks

Method blanks were reviewed for each matrix as applicable. No chlorinated pesticide or PCB contaminants were found in the method blanks.

### VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG 44626.	All TCL compounds	Tetrachlorometaxylene and dichlorobenzene were used as the surrogates.	Dibutyl chlorendate should be used as the surrogate as specified in the QAPP.	None	P

All surrogate recoveries were within validation criteria.

### VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All water samples in SDG 44626.	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Sample (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
CLJ62-A3S-008.2SC MS/MSD (All soil samples in SDG 44626).	Endosulfan II	15 (19.32-103.23)	-	109 ( $\leq 30$ )	J	A
	4,4'-DDT	-	-	65 ( $\leq 50$ )	J	
	Alpha-BHC	102 (26.18-91.93)	96 (26.18-91.93)	-	J (all detects)	
	Beta-BHC	115 (22.27-111.81)	118 (22.27-111.81)	-	J (all detects)	
	Endrin aldehyde	103 (4.55-91.83)	97 (4.55-91.83)	-	J (all detects)	

### VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent

recoveries were within validation criteria with the following exceptions:

LCS ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
LSP4360	Alpha-BHC Endrin aldehyde	97 (26.18-91.93) 98 (4.55-91.83)	CLJ62-A3S-003.2BCD CLJ62-A3S-003.2BC CLJ62-A3S-008.2SC B-P4360	J (all detects) J (all detects)	A
LS-P4359	Alpha-BHC	95 (42.18-93.35)	FB RB B-P4359	J (all detects)	A

#### IX. Regional Quality Assurance and Quality Control

Not applicable.

#### X. Pesticide Cleanup Checks

##### a. Florisil Cartridge Check

Florisil cleanup was not required and therefore not performed in this SDG.

##### b. GPC Calibration

GPC clean-up was not required and therefore not performed in this SDG.

#### XI. Target Compound Identification

Raw data were not checked for this SDG.

#### XII. Compound Quantitation and Reported CRQLs

Raw data were not checked for this SDG.

#### XIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

#### XIV. Field Duplicates

Samples CLJ62-A3S-003.2BCD and CLJ62-A3S-003.2BC were identified as field duplicates. No chlorinated pesticides or PCBs were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	CLJ62-A3S-003.2BCD	CLJ62-A3S-003.2BC	
Alpha-chlordane	430	250	53
Gamma-chlordane	420	250	51
4,4'-DDT	220	140	44
4,4'-DDE	140	82	52
4,4'-DDD	600	280	73
Endosulfan II	120	72	50

#### XV. Field Blanks

Sample "FB" was identified as a field blank. No chlorinated pesticide or PCB contaminants were found in the field blank.

Sample "RB" was identified as a rinsate. No chlorinated pesticide or PCB contaminants were found in the rinsate.

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Data Qualification Summary - SDG 44626**

SDG	Sample	Compound	Flag	A or P	Reason
44626	CLJ62-A3S-003.2BCD CLJ62-A3S-003.2BC CLJ62-A3S-008.2SC FB RB	4,4'-DDT	J	P	Continuing calibration (%D)
44626	CLJ62-A3S-003.2BCD CLJ62-A3S-003.2BC CLJ62-A3S-008.2SC FB RB	All TCL compounds	None	P	Surrogate spikes
44626	FB RB	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates
44626	CLJ62-A3S-003.2BCD CLJ62-A3S-003.2BC CLJ62-A3S-008.2SC	Endosulfan II 4,4'-DDT Alpha-BHC Beta-BHC Endrin aldehyde	J J J (all detects) J (all detects) J (all detects)	A	Matrix spike/Matrix spike duplicates (%R) (RPD)
44626	CLJ62-A3S-003.2BCD CLJ62-A3S-003.2BC CLJ62-A3S-008.2SC	Alpha-BHC Endrin aldehyde	J (all detects) J (all detects)	A	Laboratory control samples (%R)
44626	FB RB	Alpha-BHC	J (all detects)	A	Laboratory control samples (%R)

**Camp Lejeune  
Chlorinated Pesticides and PCBs - Laboratory Blank Data Qualification Summary -  
SDG 44626**

No Laboratory Blank Data Qualified in this SDG.

15796

Laboratory number: 44626-001  
Sample Designation: CLJ62-A3S-003.2BCD  
Date Extracted: 07/13/95  
Date Analyzed: 07/14/95  
Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
Moisture content was 16 % , elevating the reporting limits  
by a factor of 1.2 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	100
alpha-BHC	BDL	100
beta-BHC	BDL	100 J
gamma-BHC (Lindane)	BDL	100
delta-BHC	BDL	100
alpha-Chlordane	430	100
gamma-Chlordane	420	100
4,4'-DDT	220	200 J
4,4'-DDE	140	100
4,4'-DDD	600	200
Dieldrin	BDL	100
Endosulfan I	BDL	100
Endosulfan II	120 J	200 J
Endosulfan sulfate	BDL	200
Endrin	BDL	100
Endrin aldehyde	BDL	200 J
Heptachlor	BDL	100
Heptachlor Epoxide	BDL	100
PCB-1242 (Arochlor 1242)	BDL	1000
PCB-1254 (Arochlor 1254)	BDL	1000
PCB-1221 (Arochlor 1221)	BDL	1000
PCB-1232 (Arochlor 1232)	BDL	1000
PCB-1248 (Arochlor 1248)	BDL	1000
PCB-1260 (Arochlor 1260)	BDL	1000
PCB-1016 (Arochlor 1016)	BDL	1000
Toxaphene	BDL	5000
Endrin Ketone	BDL	200
Methoxychlor	BDL	1000

METHOD REFERENCE: EPA SW 846, 3rd Edition  
METHODS 3550 AND 8080

BDL = Below reporting limit  
J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
concentration into the calibration range.  
Detection limits were elevated accordingly.

9/22/95  
M

Laboratory number: 44626-002  
 Sample Designation: CLJ62-A3S-003.2BC  
 Date Extracted: 07/13/95  
 Date Analyzed: 07/14/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 14 % , elevating the reporting limits  
 by a factor of 1.16 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	70
alpha-BHC	BDL	70
beta-BHC	BDL	70 J
gamma-BHC (Lindane)	BDL	70
delta-BHC	BDL	70
alpha-Chlordane	250	70
gamma-Chlordane	250	70
4,4'-DDT	140	100 J
4,4'-DDE	82	70
4,4'-DDD	280	100
Dieldrin	BDL	70
Endosulfan I	BDL	70
Endosulfan II	72 J	100 J
Endosulfan sulfate	BDL	100
Endrin	BDL	70
Endrin aldehyde	BDL	100 J
Heptachlor	BDL	70
Heptachlor Epoxide	BDL	70
PCB-1242 (Arochlor 1242)	BDL	700
PCB-1254 (Arochlor 1254)	BDL	700
PCB-1221 (Arochlor 1221)	BDL	700
PCB-1232 (Arochlor 1232)	BDL	700
PCB-1248 (Arochlor 1248)	BDL	700
PCB-1260 (Arochlor 1260)	BDL	700
PCB-1016 (Arochlor 1016)	BDL	700
Toxaphene	BDL	3000
Endrin Ketone	BDL	100
Methoxychlor	BDL	700

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 AH



Laboratory number: 44626-003  
 Sample Designation: CLJ62-A3S-008.2SC  
 Date Extracted: 07/13/95  
 Date Analyzed: 07/14/95  
 Matrix: SOLID

Results are expressed on a dry (103 degrees C) basis.  
 Moisture content was 17 % , elevating the reporting limits  
 by a factor of 1.21 .

PESTICIDES/PCB'S	CONCENTRATION (ug/Kg)	REPORTING LIMIT (ug/Kg)
Aldrin	BDL	20
alpha-BHC	BDL	20
beta-BHC	BDL	20 J
gamma-BHC (Lindane)	BDL	20
delta-BHC	BDL	20
alpha-Chlordane	120	20
gamma-Chlordane	130	20
4,4'-DDT	100	50 J
4,4'-DDE	38	20
4,4'-DDD	160	50
Dieldrin	BDL	20
Endosulfan I	BDL	20
Endosulfan II	34 J	50 J
Endosulfan sulfate	BDL	50
Endrin	BDL	20
Endrin aldehyde	BDL	50 J
Heptachlor	BDL	20
Heptachlor Epoxide	BDL	20
PCB-1242 (Arochlor 1242)	BDL	200
PCB-1254 (Arochlor 1254)	BDL	200
PCB-1221 (Arochlor 1221)	BDL	200
PCB-1232 (Arochlor 1232)	BDL	200
PCB-1248 (Arochlor 1248)	BDL	200
PCB-1260 (Arochlor 1260)	BDL	200
PCB-1016 (Arochlor 1016)	BDL	200
Toxaphene	BDL	1000
Endrin Ketone	BDL	50
Methoxychlor	BDL	200

METHOD REFERENCE: EPA SW 846, 3rd Edition  
 METHODS 3550 AND 8080

BDL = Below reporting limit  
 J = Probable presence below listed detection limit

This sample required dilution to bring a high target analyte  
 concentration into the calibration range.  
 Detection limits were elevated accordingly.

9/22/95  
 HA



Laboratory number: 44626-004  
Sample Designation: FB  
Date Extracted: 07/13/95  
Date Analyzed: 07/14/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1 J
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

9/22/95  
M

Laboratory number: 44626-005  
Sample Designation: RB  
Date Extracted: 07/13/95  
Date Analyzed: 07/14/95  
Matrix: WATER

PESTICIDES/PCB'S	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Aldrin	BDL	0.05
alpha-BHC	BDL	0.05
beta-BHC	BDL	0.05
gamma-BHC (Lindane)	BDL	0.05
delta-BHC	BDL	0.05
alpha-Chlordane	BDL	0.05
gamma-Chlordane	BDL	0.05
4,4'-DDT	BDL	0.1 J
4,4'-DDE	BDL	0.05
4,4'-DDD	BDL	0.1
Dieldrin	BDL	0.05
Endosulfan I	BDL	0.05
Endosulfan II	BDL	0.1
Endosulfan sulfate	BDL	0.1
Endrin	BDL	0.05
Endrin aldehyde	BDL	0.1
Heptachlor	BDL	0.05
Heptachlor Epoxide	BDL	0.05
PCB-1242 (Arochlor 1242)	BDL	0.5
PCB-1254 (Arochlor 1254)	BDL	0.5
PCB-1221 (Arochlor 1221)	BDL	0.5
PCB-1232 (Arochlor 1232)	BDL	0.5
PCB-1248 (Arochlor 1248)	BDL	0.5
PCB-1260 (Arochlor 1260)	BDL	0.5
PCB-1016 (Arochlor 1016)	BDL	0.5
Toxaphene	BDL	2
Endrin Ketone	BDL	0.1
Methoxychlor	BDL	0.5

METHOD REFERENCE: 40 CFR PART 136, FRIDAY, OCTOBER 26, 1984  
METHOD 608

BDL = Below reporting limit

LDC #: 1579G3  
 SDG #: 44626  
 Laboratory: Pace, Inc.

**VALIDATION COMPLETENESS WORKSHEET**

EPA Level III X NEESA Level C

Date: 9-19-95  
 Page: 1 of 1  
 Reviewer: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC Organochlorine Pesticides/PCBs (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7-12-95
II.	GC/ECD Instrument Performance Check	A	
III.	Initial calibration	A	r > 0.995
IV.	Continuing calibration	SW	ND
V.	Blanks	A	
VI.	Surrogate spikes	SW, A	9/19/95
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	SW, A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florasil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	SW	D <sub>1</sub> = 1, 2
XV.	Field blanks	ND	FB=4 R=5

Note: A = Acceptable  
 N = Not provided/applicable  
 SW = See worksheet  
 ND = No compounds detected  
 R = Rinse  
 FB = Field blank  
 D = Duplicate  
 TB = Trip blank  
 EB = Equipment blank

Validated Samples:

1	P <sub>1</sub>	CLJ62-A3S-003.2BCD	SOIL	11		21
2	P <sub>1</sub>	CLJ62-A3S-003.2BC	↓	12		22
3		CLJ62-A3S-008.2SC	↓	13		23
4	FB	FB	AQ	14		24
5	R	RB	↓	15		25
6		CLJ62-A3S-008.2SCMS	SOIL	16		26
7		CLJ62-A3S-008.2SCMSD	↓	17		27
8		B-P4360	↓	18		28
		B-P4359	AQ	19		29
10				20		30

DC #: 151193  
 DG #: 49626

VALIDATION FINDING WORKSHEET  
 Continuing Calibration

Page: 1 of 1  
 Review: [Signature]  
 2nd Reviewer: [Signature]

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- What type of calibration verification calculation was performed?  %D or  RPD
- N N/A Were Evaluation mix standards run before initial calibration and before samples?
- N N/A Were Endrin & 4,4'-DDT breakdowns acceptable in the Evaluation Mix standard ( $\leq 20.0\%$  for individual breakdowns)?
- N N/A Was at least one Individual Mix standards A and/or B run daily to verify the working curve?
- N N/A Were continuing standards analyzed at a frequency of every 10 samples to verify the working curve?
- N N/A Did the continuing calibration standards meet the percent difference (%D) / relative percent difference (RPD) criteria of  $\leq 15.0\%$ ?
- Level IV/D Only
- N N/A Were the retention times for all calibrated compounds within their respective acceptance windows?
- N N/A Were the percent difference (%D) results recalculated? (Please see Calibration verification results verification worksheet.)
- N N/A Were the (%D) recalculated results within 10.0% of the reported results?

#	Date	Standard ID	Column	Compound	%D / RPD (Limit $\leq 15.0$ )	RT (Limits)	Associated Samples	Qualifications
1	7-13-95	IND 2AB P8688	112/110	O	40.5	( )	1-5	J/P
						( )		
2	7-14-95	IND 2AB P8688	112/110	R	16.8	( )	8, 9	
						( )		
3	7-14-95	IND 2AB P8688	112/110	D	16.7	( )	8, 9	
	↓	↓	↓	E	21.9	( )		
	↓	↓	↓	O	36.8	( )		
	↓	↓	↓	P/N	17.8	( )		
						( )		
4	7-17-95	IND 2AB P8688	112/110	D	15.3	( )	6, 7	
	↓	↓	↓	B	16.3	( )		
	↓	↓	↓	M	19.2	( )		
	↓	↓	↓	R	16.0	( )		
						( )		
						( )		
5	7-17-95	IND 2AB P8688	112/110	F	15.1	( )	6, 7	
	↓	↓	↓	O	37.7	( )		
						( )		
						( )		

- |              |                       |                  |                       |                    |                 |                  |             |           |
|--------------|-----------------------|------------------|-----------------------|--------------------|-----------------|------------------|-------------|-----------|
| A. Alpha BHC | E. Heptachlor         | I. Dieldrin      | M. 4,4'-DDD           | Q. Endrin ketone   | U. Toxaphene    | Y. Aroclor-1242  | CC. DB 608  | GG. _____ |
| B. Beta BHC  | F. Aldrin             | J. 4,4'-DDE      | N. Endosulfan sulfate | R. Endrin aldehyde | V. Aroclor-1018 | Z. Aroclor-1248  | DD. DB 1701 | HH. _____ |
| C. Delta BHC | G. Heptachlor epoxide | K. Endrin        | O. 4,4'-DDT           | S. Alpha-chlordane | W. Aroclor-1221 | AA. Aroclor-1254 | EE. _____   | II. _____ |
| D. Gamma BHC | H. Endosulfan I       | L. Endosulfan II | P. Methoxychlor       | T. Gamma-chlordane | X. Aroclor-1232 | BB. Aroclor-1260 | FF. _____   | JJ. _____ |

LDC #: 15 93  
 SDG #: 446-6

VALIDATION FINISHES WORKSHEET  
Surrogate Spikes

Pa 1 of 1  
 Reviewer: MM  
 2nd Reviewer: DN

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Were surrogates spiked into all samples, standards and blanks?  
 N N/A Did all surrogate percent recoveries (%R) meet the QC limits stated below?

#	Date	Sample ID	Column	Surrogate Compound	%R (Limits)	Qualifications
1		DIBUTYLCHLOROSULFATE SPECIFIED AS SURROGATE IN QAPP.			( ) ALL SAMPLES	NONE/P
		TETRAHYDROMETHA XYLENE AND DICHLORO BENZENE USED AS SURROGATES			( ) AND BLANKS	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	

Letter Designation	Surrogate Compound	Recovery QC Limits (Soil)	Recovery QC Limits (Water)	Comments
A				
B				

**VALIDATION FINDINGS WORKSHEET**  
**Matrix Spike/Mat Spike Duplicates**

1 of 1  
 Rev. MD  
 2nd Reviewer: (Signature)

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- Y (N) N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?  
 Y (N) N/A Was a MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?  
 Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits stated below?  
 Level IV/D Only  
 Y N N/A Were the percent recoveries (%R) and the relative percent differences (RPD) recalculated?  
 Y N N/A Were the %R and RPD reported results within 10.0% of the recalculated results?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
1	7-17-95	617	G	15 (19.32-103.23)	( )	109 (≤30)	All Soil Samples	J/A
			F	( )	( )	65 (≤50)		↓
			H	102 (26.18-91.93)	96 (26.18-91.93)	( )		J/A (DETECTS)
			<del>A</del>	<del>107 (30.93-87.75)</del>	<del>99 (30.93-87.75)</del>	( )		↓
2	7-14-95	No AQ MS/MSD	ALL	( )	( )	( )	All AQ Samples	None/P
3	7-17-95	617	I	115 (22.27-111.81)	118 (22.27-111.81)	( )	All Soil Samples	J/A (DETECTS)
			<del>R</del>	<del>97 (33.19-93.39)</del>	<del>101 (33.19-93.39)</del>	( )		↓
			E	111 (32.76-104.4)	( )	( )		
			J	103 (4.55-91.83)	97 (4.55-91.83)	( )		

Letter Designation	Compound	Soil QC Limits		Water QC Limits	
		% Recovery	RPD	% Recovery	RPD
A	Gamma-BHC	46-127 30.93-87.75	≤50	56-123	≤15
B	Heptachlor	35-130	≤31	40-131	≤20
C	Aldrin	39-132	≤43	40-120	≤22
D	Dieldrin	31-39 33.19-93.39	≤38	52-126	≤18
E	Endrin	42-139 32.96-104.4	≤45	56-121	≤21
F	4,4'-DDT	23-134	≤50	38-127	≤27
G	Endosulfan II	19.32-103.23	≤30		
H	Alpha-BHC	26.18-91.93	≤30		
I	Beta-BHC	22.27-111.81	≤30		
J	Endrin aldehyde	4.55-91.83	≤30		



LDC #: 157963  
 SDG #: 44626

VALIDATION FINDINGS WORKSHEET  
Field Duplicates

Page: 1 of 1  
 Reviewer: DT  
 2nd reviewer: (Signature)

THOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

N N/A  
 N N/A

Were field duplicate pairs identified in this SDG?  
 Were target compounds detected in this field duplicate pairs?

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	1	2	
$\alpha$ -Chlordane	430	250	53
$\gamma$ -Chlordane	420	250	51
4,4'-DDT	220	140	44
4,4'-DDE	140	82	52
4,4'-DDD	600	280	73

Compound	Concentration ( $\mu\text{g}/\text{kg}$ )		RPD
	1	2	
Endosulfan II	120	72	50

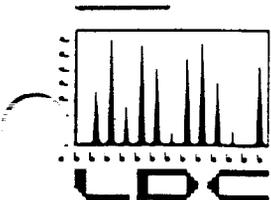
Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

**Camp Lejeune  
Data Validation Reports  
LDC# 1729**

Polychlorinated Biphenyls

*LDC*



**LABORATORY DATA CONSULTANTS, INC.**

7750 El Camino Real, Suite 2C, Carlsbad, CA 92009 Phone: 619/634-0437 Fax: 619/634-0439

OHM Remediation Services Corp.  
5335 Triangle Parkway, Suite 450  
Norcross, GA 30092  
ATTN: Ms. Missy Art

January 11, 1996

SUBJECT: Camp Lejeune, Data Validation

Dear Ms. Art,

Enclosed are the final validation reports for the fractions listed below. This SDG was received on January 5, 1996.

**LDC Project # 1729:**

<u>SDG #</u>	<u>Fraction</u>
CLJ62S-001	Polychlorinated Biphenyls

The data validation was performed under NEESA Level C guidelines. The analyses were validated using the following documents, as applicable to each method:

- NEESA document 20.2-047B, Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program, June 1988.
- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, February 1994
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, November 1986; Revision 1, July 1992; Revision 2, November 1992; and update 1, August 1993

Please feel free to contact us if you have any questions.

Sincerely,

Richard M. Amano  
President/Principal Chemist



**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Camp Lejeune  
**Collection Date:** November 21, 1995  
**LDC Report Date:** January 8, 1996  
**Matrix:** Soil/Water  
**Parameters:** Polychlorinated Biphenyls  
**Laboratory:** OHM Remediation Services Corp.  
**Sample Delivery Group (SDG):** CLJ62-001

**Sample Identification**

CLJ62S-001  
CLJ62S-002  
CLJ62S-003  
CLJ62S-004  
CLJ62S-005  
CLJ62S-006  
CLJ62S-007  
CLJ62S-008  
CLJ62S-009  
CLJ62S-010  
CLJ62S-10D  
CLJ62S-011  
CLJ62S-012  
CLJ62-FB  
CLJ62-RB  
CLJ62S-001MS  
CLJ62S-001MSD  
CLJ62-FBMS  
CLJ62-FBMSD

## Introduction

This data review covers 15 soil samples and 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8080 for Polychlorinated Biphenyls.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for EPA SW 846 Method 8080. The modifications were based on EPA SW 846 Method 8080.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XIV.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or element was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or element was analyzed for but not detected. The sample detection limit is an estimated value.

## **I. Technical Holding Times**

All technical holding time requirements were met.

## **II. GC/ECD Instrument Performance Check**

Instrument performance was acceptable unless noted otherwise under initial calibration and continuing calibration sections.

## **III. Initial Calibration**

Initial calibration of multicomponent analytes was performed for the primary (quantitation) column as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for all compounds.

## **IV. Continuing Calibration**

Continuing calibration was performed at required frequencies.

The percent differences (%D) of calibration factors in continuing standard mixtures were within the 15.0% QC limits.

## **V. Blanks**

Method blanks were reviewed for each matrix as applicable. No polychlorinated biphenyl contaminants were found in the method blanks.

## **VI. Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries were within QC limits.

## **VII. Matrix Spike/Matrix Spike Duplicates**

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## **VIII. Laboratory Control Samples (LCS)**

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries were within validation criteria.

## **IX. Regional Quality Assurance and Quality Control**

Not applicable.

## **X. Pesticide Cleanup Checks**

### **a. Florisil Cartridge Check**

Florisil cleanup was not required and therefore not performed in this SDG.

### **b. GPC Calibration**

GPC cleanup was not required and therefore not performed in this SDG.

## **XI. Target Compound Identification**

Raw data were not reviewed for this SDG.

## **XII. Compound Quantitation and Reported CRQLs**

Raw data were not reviewed for this SDG.

## **XIII. Overall Assessment of Data**

Data flags are summarized at the end of this report.

## **XIV. Field Duplicates**

No field duplicates were identified in this SDG.

## **XV. Field Blanks**

Sample CLJ62-FB was identified as a field blank. No polychlorinated biphenyl contaminants were found in this blank.

Sample CLJ62-RB was identified as a rinsate blank. No polychlorinated biphenyl contaminants were found in this blank.

**Camp Lejeune  
Polychlorinated Biphenyls - Data Qualification Summary - SDG CLJ62-001**

No Sample Data Qualified in this SDG

**Camp Lejeune  
Polychlorinated Biphenyls - Laboratory Blank Data Qualification Summary - SDG  
CLJ62-001**

No Sample Data Qualified in this SDG

1D 1729A3  
 PESTICIDE ORGANICS ANALYSIS DATA SHEET 0012 EPA SAMPLE NO.

CLJ62S-001

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0710P  
 Sample wt/vol: 30.1 (g/mL) G Lab File ID: UR2327  
 % Moisture: 13 decanted: (Y/N) N Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 10.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
 (ug/L or ug/Kg) UG/KG

Q *er*  
*1/10/96*

12674-11-2-----	Aroclor-1016	190	U
11104-28-2-----	Aroclor-1221	190	U
11141-16-5-----	Aroclor-1232	190	U
53469-21-9-----	Aroclor-1242	190	U
12672-29-6-----	Aroclor-1248	190	U
11097-69-1-----	Aroclor-1254	190	U
11096-82-5-----	Aroclor-1260	190	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0017 EPA SAMPLE NO.

CLJ62S-002

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) SOIL Lab Sample ID: JP0711P

Sample wt/vol: 30.3 (g/mL) G Lab File ID: UR2328

% Moisture: 15 decanted: (Y/N) N Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG                      Q

12674-11-2-----	Aroclor-1016	190	U
11104-28-2-----	Aroclor-1221	190	U
11141-16-5-----	Aroclor-1232	190	U
53469-21-9-----	Aroclor-1242	190	U
12672-29-6-----	Aroclor-1248	190	U
11097-69-1-----	Aroclor-1254	190	U
11096-82-5-----	Aroclor-1260	130	J

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0022

EPA SAMPLE NO.

CLJ62S-003

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0712P  
 Sample wt/vol: 31.1 (g/mL) G Lab File ID: UR2329  
 % Moisture: 11 decanted: (Y/N) N Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 20.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG

Q 21 1/10/96

12674-11-2-----	Aroclor-1016	360	U
11104-28-2-----	Aroclor-1221	360	U
11141-16-5-----	Aroclor-1232	360	U
53469-21-9-----	Aroclor-1242	360	U
12672-29-6-----	Aroclor-1248	360	U
11097-69-1-----	Aroclor-1254	360	U
11096-82-5-----	Aroclor-1260	4400	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0027 EPA SAMPLE NO.

CLJ62S-004

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) SOIL Lab Sample ID: JP0713P

Sample wt/vol: 31.0 (g/mL) G Lab File ID: UR2330

% Moisture: 10 decanted: (Y/N) N Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95

Injection Volume: 1.0 (uL) Dilution Factor: 20.0

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

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG Q

12674-11-2-----Aroclor-1016	360	U
11104-28-2-----Aroclor-1221	360	U
11141-16-5-----Aroclor-1232	360	U
53469-21-9-----Aroclor-1242	360	U
12672-29-6-----Aroclor-1248	360	U
11097-69-1-----Aroclor-1254	360	U
11096-82-5-----Aroclor-1260	5100	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0032

EPA SAMPLE NO.

CLJ62S-005

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0714P  
 Sample wt/vol: 31.1 (g/mL) G Lab File ID: UR2331  
 % Moisture: 9 decanted: (Y/N) ✓ Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 10.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG
12674-11-2	Aroclor-1016	180	U
11104-28-2	Aroclor-1221	180	U
11141-16-5	Aroclor-1232	180	U
53469-21-9	Aroclor-1242	180	U
12672-29-6	Aroclor-1248	180	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	2700	

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11/16/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0037

EPA SAMPLE NO.

CLJ62S-006

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) SOIL Lab Sample ID: JP0715P

Sample wt/vol: 30.8 (g/mL) G Lab File ID: UR2332

% Moisture: 11 decanted: (Y/N) N Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG                      Q

12674-11-2-----	Aroclor-1016	180	U
11104-28-2-----	Aroclor-1221	180	U
11141-16-5-----	Aroclor-1232	180	U
53469-21-9-----	Aroclor-1242	180	U
12672-29-6-----	Aroclor-1248	180	U
11097-69-1-----	Aroclor-1254	180	U
11096-82-5-----	Aroclor-1260	740	

21  
11/27/95

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0042

EPA SAMPLE NO.

CLJ62S-007

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16866A SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) SOIL Lab Sample ID: JP0716P

Sample wt/vol: 30.7 (g/mL) G Lab File ID: UR2335

% Moisture: 5 decanted: (Y/N) N Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG                      Q

12674-11-2-----	Aroclor-1016	170	U
11104-28-2-----	Aroclor-1221	170	U
11141-16-5-----	Aroclor-1232	170	U
53469-21-9-----	Aroclor-1242	170	U
12672-29-6-----	Aroclor-1248	170	U
11097-69-1-----	Aroclor-1254	170	U
11096-82-5-----	Aroclor-1260	2700	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0047

EPA SAMPLE NO.

CLJ62S-008

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16366N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0717P  
 Sample wt/vol: 30.8 (g/mL) G Lab File ID: UR2336  
 % Moisture: 10 decanted: (Y/N) N Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/27/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 10.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2-----	Aroclor-1016	180	U
11104-28-2-----	Aroclor-1221	180	U
11141-16-5-----	Aroclor-1232	180	U
53469-21-9-----	Aroclor-1242	180	U
12672-29-6-----	Aroclor-1248	180	U
11097-69-1-----	Aroclor-1254	180	U
11096-82-5-----	Aroclor-1260	1200	

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11/27/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0052 EPA SAMPLE NO.

CLJ62S-009

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0718P  
 Sample wt/vol: 31.1 (g/mL) G Lab File ID: UR2352  
 % Moisture: 9 decanted: (Y/N) N Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/28/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 20.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO. COMPOUND CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG

Q

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*11/28/95*

12674-11-2-----Aroclor-1016	350	U
11104-28-2-----Aroclor-1221	350	U
11141-16-5-----Aroclor-1232	350	U
53469-21-9-----Aroclor-1242	350	U
12672-29-6-----Aroclor-1248	350	U
11097-69-1-----Aroclor-1254	350	U
11096-82-5-----Aroclor-1260	4600	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0057

EPA SAMPLE NO.

CLJ62S-010

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0719P  
 Sample wt/vol: 30.1 (g/mL) G Lab File ID: UR2353  
 % Moisture: 10 decanted: (Y/N) N Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/28/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 50.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO.

COMPOUND

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

Q

12674-11-2-----	Aroclor-1016	920	U
11104-28-2-----	Aroclor-1221	920	U
11141-16-5-----	Aroclor-1232	920	U
53469-21-9-----	Aroclor-1242	920	U
12672-29-6-----	Aroclor-1248	920	U
11097-69-1-----	Aroclor-1254	920	U
11096-82-5-----	Aroclor-1260	5200	

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*11/28/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0062

EPA SAMPLE NO.

CLJ62S-10D

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC  
 Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001  
 Matrix: (soil/water) SOIL Lab Sample ID: JP0720P  
 Sample wt/vol: 31.0 (g/mL) G Lab File ID: UR2354  
 % Moisture: 9 decanted: (Y/N) N Date Received: 11/22/95  
 Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95  
 Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/28/95  
 Injection Volume: 1.0 (uL) Dilution Factor: 50.0  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Sulfur Cleanup: (Y/N) N

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
 (ug/L or ug/Kg) UG/KG                      Q

12674-11-2-----	Aroclor-1016	890	U
11104-28-2-----	Aroclor-1221	890	U
11141-16-5-----	Aroclor-1232	890	U
53469-21-9-----	Aroclor-1242	890	U
12672-29-6-----	Aroclor-1248	890	U
11097-69-1-----	Aroclor-1254	890	U
11096-82-5-----	Aroclor-1260	6800	

*21/11/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0067

EPA SAMPLE NO.

CLJ62S-011

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16366N SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) SOIL Lab Sample ID: JP0721P

Sample wt/vol: 30.5 (g/mL) G Lab File ID: UR2355

% Moisture: 12 decanted: (Y/N) N Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/28/95

Injection Volume: 1.0 (uL) Dilution Factor: 50.0

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

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG                      Q

12674-11-2-----	Aroclor-1016	930	U
11104-28-2-----	Aroclor-1221	930	U
11141-16-5-----	Aroclor-1232	930	U
53469-21-9-----	Aroclor-1242	930	U
12672-29-6-----	Aroclor-1248	930	U
11097-69-1-----	Aroclor-1254	930	U
11096-82-5-----	Aroclor-1260	6600	

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*11/28/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0072

EPA SAMPLE NO.

CLJ62S-012

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16866A SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) SOIL Lab Sample ID: JP0722P

Sample wt/vol: 30.4 (g/mL) G Lab File ID: UR2356

% Moisture: 11 decanted: (Y/N) N Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) 3540 Date Extracted: 11/22/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/28/95

Injection Volume: 1.0 (uL) Dilution Factor: 50.0

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

CAS NO.                      COMPOUND                      CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG                      Q

12674-11-2-----	Aroclor-1016	930	U
11104-28-2-----	Aroclor-1221	930	U
11141-16-5-----	Aroclor-1232	930	U
53469-21-9-----	Aroclor-1242	930	U
12672-29-6-----	Aroclor-1248	930	U
11097-69-1-----	Aroclor-1254	930	U
11096-82-5-----	Aroclor-1260	6000	

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*11/28/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

0077

EPA SAMPLE NO.

CLJ62-FB

Lab Name: OHM ANALYTICAL DIVISION Contract: NFESC

Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) WATER Lab Sample ID: JP0723P

Sample wt/vol: 950 (g/mL) ML Lab File ID: UF1301

% Moisture: N/A decanted: (Y/N)      Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 11/24/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/25/95

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
12674-11-2-----	Aroclor-1016	1.1	U
11104-28-2-----	Aroclor-1221	1.1	U
11141-16-5-----	Aroclor-1232	1.1	U
53469-21-9-----	Aroclor-1242	1.1	U
12672-29-6-----	Aroclor-1248	1.1	U
11097-69-1-----	Aroclor-1254	1.1	U
11096-82-5-----	Aroclor-1260	1.1	U

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*11/25/95*

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PESTICIDE ORGANICS ANALYSIS DATA SHEET **0080**

EPA SAMPLE NO.

CLJ62-RB

Lab Name: OHM ANALYTICAL DIVISION

Contract: NFESC

Lab Code: N/A Case No.: 16866N SAS No.: N/A SDG No.: CLJ62S-001

Matrix: (soil/water) WATER

Lab Sample ID: JP0724P

Sample wt/vol: 980 (g/mL) ML

Lab File ID: UF1302

% Moisture: N/A decanted: (Y/N)     

Date Received: 11/22/95

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 11/24/95

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 11/25/95

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:     

Sulfur Cleanup: (Y/N) N

CAS NO.

COMPOUND

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

Q

12674-11-2-----Aroclor-1016	1.0	U
11104-28-2-----Aroclor-1221	1.0	U
11141-16-5-----Aroclor-1232	1.0	U
53469-21-9-----Aroclor-1242	1.0	U
12672-29-6-----Aroclor-1248	1.0	U
11097-69-1-----Aroclor-1254	1.0	U
11096-82-5-----Aroclor-1260	1.0	U

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1/10/95

METHOD: GC Polychlorinated Biphenyls (EPA SW 846 Method 8080)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 11-21-95
II.	GC/ECD Instrument Performance Check	<del>A</del>	Not Required
III.	Initial calibration	A	SRSD
IV.	Continuing calibration	A	SD
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional quality assurance and quality control	N	
Xa.	Florisil cartridge check	N	
Xb.	GPC Calibration	N	
XI.	Target compound identification	N	
XII.	Compound quantitation and reported CRQLs	N	
XIII.	Overall assessment of data	A	
XIV.	Field duplicates	N	
XV.	Field blanks	ND	FB=14, RB=15

Note: A = Acceptable      ND = No compounds detected      D = Duplicate  
 N = Not provided/applicable      R = Rinstate      TB = Trip blank  
 SW = See worksheet      FB = Field blank      EB = Equipment blank  
 RB = Rinstate blank

Validated Samples:

1	CLJ62S-001	Soil	11	CLJ62S-100	Soil	21	PBIK 01	11/24	Soil
2	CLJ62S-002		12	CLJ62S-011		22	<del>PBIK 01</del>		
3	CLJ62S-003		13	CLJ62S-012		23			
4	CLJ62S-004		14	CLJ62-FB	AQ	24			
5	CLJ62S-005		15	CLJ62-RB		25			
6	CLJ62S-006		16	CLJ62S-001MS	Soil	26			
7	CLJ62S-007		17	CLJ62S-001MSD		27			
8	CLJ62S-008		18	CLJ62-FBMS	AQ	28			
9	CLJ62S-009		19	CLJ62-FBMSD		29			
10	CLJ62S-010		20	PBIK 01		30		11/27	

LDC #: 1729  
 SDG #: CLT62-001

VALIDATION FINDING WORKSHEET  
Surrogate Spikes

Page 1 of 1  
 Reviewer: DD  
 2nd Reviewer: OC

METHOD: GC Pesticides/PCBs (EPA SW 846 Method 8080)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

- N N/A Were surrogates spiked into all samples, standards and blanks?  
 N N/A Did all surrogate percent recoveries (%R) meet the QC limits stated below?

#	Date	Sample ID	Column	Surrogate Compound	%R (Limits)	Qualifications
1	11-28-95	10	1	A	0 ( 30-150 )	No qual's
		Diluted 50x	1	B	0 ( )	
2		11	1	A	0 ( )	
		Diluted 50x	1	B	0 ( )	
3		12	1	A	0 ( )	No qual's
		Diluted 50x	X	B	( )	
4		13	1	A	0 ( )	
		Diluted 50x	1	B	0 ( )	
5		All Samples	BOTH	TCX & DCB were used as surrogates instead of dibutyl chlorodane (specified by contract)		No qual's
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	
					( )	

Letter Designation	Surrogate Compound	Recovery QC Limits (Soil)	Recovery QC Limits (Water)	Comments
A	TCX	30-150		
B	DCB	30-150		

COLUMN 1 : DB-5  
 COLUMN 2 : DB-608

**Appendix F**  
**Chain-of-Custody**



OHM Corporation

# CHAIN-OF-CUSTODY RECORD

B COPY

Form 0019  
Field Technical Services  
Rev. 08/89

144124

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <b>CAMP Lejeune</b>		PROJECT LOCATION <b>Jacksonville, NC</b>		NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)  <i>* SEE ATTACHED METHOD</i>
PROJ. NO. <b>16866</b>	PROJECT CONTACT <b>GREG DRAKE</b>	PROJECT TELEPHONE NO. <b>910 451 1809</b>			
CLIENT'S REPRESENTATIVE <b>John Cotton</b>		PROJECT MANAGER/SUPERVISOR <b>Jim Dunn / Randy Smith</b>			

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	REMARKS
1	CLJ011-A0C1-001	3/18/95	1400	X		Soil from AOC-1 6 Grabs Samples Andover comp.	3-3209	
2	CLJ011-A0C2-001	3/18/95	1400	X		Soil from AOC-2 6 Grabs Samples Andover comp.	3-3209	
3	CLJ011-A0C3-001	3/18/95	1400	X		Soil from AOC-3 6 Grabs Samples Andover comp.	3-3209	
4	CLJ011-A0C4-001	3/18/95	1400	X		Soil from AOC-4 6 Grabs Samples Andover comp.	3-3209	
5								
6								
7								
8								
9								
10								

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1 of 4	Greg Drake	FEP-EX			14 DAY TAT  PLEASE FAX RESULTS 910 451 1809  SAMPLER'S SIGNATURE <i>[Signature]</i> OHM 8793
2						
3						
4						





OHM Corporation

# CHAIN-OF-CUSTODY RECORD

Field Techn

135239

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3528

PROJECT NAME <i>Camp Lejeune D.062</i>		PROJECT LOCATION <i>Camp Lejeune, NC</i>	
PROJ. NO. <i>16866</i>	PROJECT CONTACT <i>Randy Smith</i>	PROJECT TELEPHONE NO. <i>(910)451-1809</i>	
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR <i>Jim Dunn</i>	

NUMBER OF CONTAINERS

ANALYSIS DESIRED  
(INDICATE SEPARATE CONTAINERS)

*8080 MTL.*

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	REMARKS												
1	CLJ62-A3S-004-BC	5/30	1435		X	Base of excavation	1	X												
2	CLJ62-A3S-006-BC	5/30	1448		X	Base of excavation	1	X												
3	CLJ62-A3S-006-BC dup	5/30	1448		X	Base of excavation	1	X												
4	CLJ62-FB					Field Blank	3	X												
5	CLJ62-RB					Rinsate Blank	3	X												
6																				
7																				
8																				
9																				
10																				

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-3	<i>[Signature]</i>		6/1	13:30	48 hr. TAT
2						
3						
4						<i>[Signature]</i> SAMPLER'S SIGNATURE





OHM Corporation

# CHAIN-OF-CUSTODY RECORD

LAB COPY  
Form 0019  
Field Technical Services  
Rev. 08/83  
135265

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <i>Camp Lejeune D.O. 62</i>		PROJECT LOCATION <i>Camp Lejeune, NC</i>	
PROJ NO. <i>16866</i>	PROJECT CONTACT <i>Randy Smith</i>	PROJECT TELEPHONE NO. <i>(910) 451-1809</i>	
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR <i>Jim Dunn</i>	

NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)
	<i>9080 MTH</i>

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	REMARKS
1	<i>CLJ62-A45 -001-BC</i>	<i>6/7</i>	<i>10:39</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
2	<i>CLJ62-A45 -001-CS</i>	<i>6/7</i>	<i>1041</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
3	<i>CLJ62-A45 -001-CSD</i>	<i>6/7</i>	<i>1041</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
4	<i>CLJ62-A35 -011-CS</i>	<i>6/7</i>	<i>1112</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
5	<i>CLJ62-A25 -002-CS</i>	<i>6/7</i>	<i>1222</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
6	<i>CLJ62-A25 -002-CSD</i>	<i>6/7</i>	<i>1225</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
7	<i>CLJ62-A35 -015-CS</i>	<i>6/7</i>	<i>1258</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
8	<i>CLJ62-A35 -014-BC</i>	<i>6/7</i>	<i>1251</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
9	<i>CLJ62-A35 -014-CS</i>	<i>6/7</i>	<i>1248</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
10	<i>CLJ62-A35 -015-BC</i>	<i>6/7</i>	<i>1239</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
<i>1</i>	<i>1-10</i>	<i>[Signature]</i>		<i>6/8</i>	<i>1340</i>	<i>48 hr. TAT</i>
<i>2</i>						
<i>3</i>						
<i>4</i>						<i>[Signature]</i> SAMPLER'S SIGNATURE



OHM Corporation

# CHAIN-OF-CUSTODY RECORD

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <i>Camp Levee DD 62</i>		PROJECT LOCATION <i>Camp Levee, NC</i>	
PROJ. NO. <i>16866</i>	PROJECT CONTACT <i>Randy Smith</i>	PROJECT TELEPHONE NO. <i>(910) 451-1809</i>	
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR <i>Jim Dunn</i>	

ANALYSIS DESIRED  
(INDICATE SEPARATE CONTAINERS)

*8080 MTH*

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	REMARKS
1	<i>CLJ62-A35 -015-BCD</i>	<i>6/7</i>	<i>1240</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
2	<i>CLJ62-A35 013-BCD</i>	<i>6/7</i>	<i>1228</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	<i>This sample is not BCD but only BC</i>
3	<i>CLJ62-A35 -012-CS</i>	<i>6/7</i>	<i>1215</i>		<i>X</i>	<i>Confirmation Sample</i>	<i>1</i>	
4	<i>CLJ62-A3-RB</i>	<i>6/7</i>	<i>1300</i>	<i>X</i>		<i>Rinsate Blank from AOC3</i>	<i>3</i>	
5	<i>CLJ62-A4-RB</i>	<i>6/7</i>	<i>1043</i>	<i>X</i>		<i>Rinsate Blank from AOC4</i>	<i>3</i>	
6	<i>CLJ62-A2-RB</i>	<i>6/7</i>	<i>1227</i>	<i>X</i>		<i>Rinsate Blank from AOC2</i>	<i>3</i>	
7	<i>CLJ62-FB</i>	<i>6/7</i>	<i>1320</i>			<i>Field Blank</i>	<i>3</i>	
8								
9								
10								

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
<i>1</i>	<i>1-7</i>	<i>[Signature]</i>				<i>48 hr TAT</i>
<i>2</i>						
<i>3</i>						
<i>4</i>						<i>[Signature]</i> SAMPLER'S SIGNATURE

# CHAIN-OF-CUSTODY RECORD

Form 0019  
Field Technical Services  
Rev. 08/89

135267



O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <b>Camp Lejeune D.O. 62</b>		PROJECT LOCATION <b>Camp Lejeune, NC</b>	
PROJ NO <b>16866</b>	PROJECT CONTACT <b>Randy Smith</b>	PROJECT TELEPHONE NO. <b>(910) 451-1809</b>	
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR <b>Jim Dunn</b>	

ANALYSIS DESIRED  
(INDICATE SEPARATE CONTAINERS)

*MTH 8050*

ITEM NO	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	REMARKS
1	CLJ62-A3-FB	6/8	1500			Field Blank	3 X	
2	CLJ62-A3-RB	6/8	1540			Rinsate Blank	3 X	
3	CLJ62-A3S-016-BC	6/8	1515		X	Base Sample	1 X	
4								
5								
6								
7								
8								
9								
10								

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-3	<i>[Signature]</i>		6/13	1415	48 hr. TAT
2						
3						
4						<i>[Signature]</i> SAMPLER'S SIGNATURE



OHM Corporation

# CHAIN-OF-CUSTODY RECORD

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Form 001  
Field Technical Service  
Rev 08/E

144106

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME		PROJECT LOCATION		NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)	REMARKS												
PROJ. NO.	PROJECT CONTACT	PROJECT TELEPHONE NO.				<div style="text-align: center; border: 1px solid black; padding: 5px;"> <i>8080 MTH</i> </div>												
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR																
ITEM NO.	SAMPLE NUMBER	DATE	TIME													COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)
Camp Lejeune D.O. 62		Camp Lejeune, NC		1	X	<div style="text-align: center; border: 1px solid black; padding: 5px;"> <i>8080 MTH</i> </div>												
16866	Randy Smith	(910) 451-1809																
Vann Marshall		Jim Dunn																
1	CLJ62-A35-11.6 BC	6/15	1114														X	Base Conf. Sample
2	CLJ62-A35-12.6-BC	6/15	1118														X	Base Conf. Sample
3	CLJ62-A35-13.6 CS	6/15	1125														X	Side wall Conf. Sample
4	CLJ62-A35-14.6 CS	6/15	1138														X	Side wall Conf. sample
5	CLJ62-A35-16.6 CS D	6/15	1138														X	Side wall Conf. sample
6	CLJ62-A35-17.6 BC	6/15	1150														X	Base Conf. sample
7	CLJ62-A35-17.6 CS	6/15	1156														X	Side wall Conf. sample
8	CLJ62-A25-001Z BC	6/15	1511		X	Base Conf. sample												
9	CLJ62-A25-002Z CS	6/15	1528		X	Side wall Conf. sample												
10	CLJ62-A25-003Z CS	6/15	1523		X	Side wall Conf. sample												

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-10	<i>[Signature]</i>		6/15	1600	48 hr TAT.
2						
3						
4						

*[Signature]*  
SAMPLER'S SIGNATURE



OHM Corporation

# CHAIN-OF-CUSTODY RECORD

144105

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <i>Camp Lejeune DO62</i>		PROJECT LOCATION <i>Camp Lejeune, NC</i>		NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)	<i>CO SO MAT</i>			
PROJ. NO. <i>16866</i>	PROJECT CONTACT <i>Randy Smith</i>	PROJECT TELEPHONE NO. <i>(910) 451-1809</i>							
CLIENT'S REPRESENTATIVE <i>Vann Marshburn</i>		PROJECT MANAGER/SUPERVISOR <i>Jim Dunn</i>							
ITEM NO.	SAMPLE NUMBER	DATE	TIME				COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)
1	<i>CLJ62-A35 - RB</i>	<i>6/15</i>	<i>1201</i>	<i>X</i>		<i>Rinsate Blank</i>	3	<i>X</i>	<i>Sample going to PACE</i>
2	<i>CLJ62-A25 - RB</i>	<i>6/15</i>	<i>1525</i>	<i>X</i>		<i>Rinsate Blank</i>	3	<i>X</i>	
3	<i>CLJ62-FB</i>	<i>6/15</i>	<i>1534</i>	<i>X</i>		<i>Field Blank</i>	3	<i>X</i>	
4									
5									
6									
7									
8									
9									
10									

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS <i>48 hr. TAT</i>
				<i>6/15</i>	<i>1600</i>	
1	<i>1-3</i>	<i>[Signature]</i>				<i>[Signature]</i> SAMPLER'S SIGNATURE
2						
3						
4						



OHM Corporation

# CHAIN-OF-CUSTODY RECORD

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Form 1019  
Field Technical Services  
Rev 04/88

144137

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526												
PROJECT NAME <b>Camp Lejeune D.O. 62</b>				PROJECT LOCATION <b>Camp Lejeune, NC</b>						NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)  <b>8080 MTH</b>	
PROJ. NO. <b>16866</b>		PROJECT CONTACT <b>Randy Smith</b>		PROJECT TELEPHONE NO. <b>(910) 451-1809</b>								
CLIENT'S REPRESENTATIVE				PROJECT MANAGER/SUPERVISOR <b>Jim Dunn</b>								
REMARKS <b>44544</b>												
ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)				NUMBER OF CONTAINERS	ANALYSIS DESIRED	REMARKS
1	CLJ62-A35-005.1SC	6/29	1018		X	Sidewall of Excavation conf. Sample				1 8oz.	X -1	
2	CLJ62-A35-010.1SC	6/29	1022		X	Sidewall of Excavation conf. Sample				1 8oz.	X -2	
3	CLJ62-A35-005.1BC	6/29	1028		X	Base of Excavation conf. Sample				1 8oz.	X -3	
4	CLJ62-A35-005.1BCD	6/29	1028		X	Base of Excavation conf. Sample				1 8oz.	X -4	
5	CLJ62-A35-003.1BC	6/29	1407		X	Base of Excavation conf. Sample				1 8oz.	X -5	
6	CLJ62-A35-008.1SC	6/29	1403		X	Sidewall of Excavation conf. Sample				1 8oz.	X	
7	CLJ62-A35-RB	6/29	1410		X	Resate Blank				2 32oz.	X	
8	CLJ62-A35-FB	6/29	1413		X	Field Blank				2 32oz.	X -7	
9												
10												
TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY		TRANSFERS ACCEPTED BY		DATE	TIME	REMARKS				
1	1-8	Aaron R. Aron		Fed-Ex		6/29		48 hr. T.A.T.				
2				Gretchen Franckheim		6/30/15	1015					
3												
4								SAMPLER'S SIGNATURE <i>Aaron R. Aron</i>				

FILE NEW ENJ NH TEL: 4039267030 JUN 30 05 1150 NO. 001 4-11



OHM Corporation

# CHAIN-OF-CUSTODY RECORD

LAB COPY

Form 0019  
Field Technical Services  
Rev. 05-89

144135

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <i>Camp Lejeune D062</i>		PROJECT LOCATION <i>Camp Lejeune, N.C</i>	
PROJ NO <i>16866</i>	PROJECT CONTACT <i>Randy Smith</i>	PROJECT TELEPHONE NO. <i>910 451-2390</i>	
CLIENT'S REPRESENTATIVE <i>VANN Marshburn</i>		PROJECT MANAGER/SUPERVISOR <i>Jim Dunn</i>	

NUMBER OF CONTAINERS

ANALYSIS DESIRED  
(INDICATE SEPARATE CONTAINERS)

*4080*

ITEM NO	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	ANALYSIS DESIRED	REMARKS
1	<i>CLJ62-A35 003.2 BCD</i>	<i>7/12</i>	<i>13:00</i>		<input checked="" type="checkbox"/>	<i>Sample of base in Area 3 3 Duplicate</i>	<i>1 802</i>	<input checked="" type="checkbox"/>	
2	<i>CLJ62-A35 003.2 BC</i>	<i>7/12</i>	<i>13:00</i>		<input checked="" type="checkbox"/>	<i>Sample of base in Area 3</i>	<i>1 802</i>	<input checked="" type="checkbox"/>	
3	<i>CLJ62-A35 009.25C</i>	<i>7/12</i>	<i>13:05</i>		<input checked="" type="checkbox"/>	<i>Sample of Sidewalk in Area 3</i>	<i>1 802</i>	<input checked="" type="checkbox"/>	
4	<i>FB</i>	<i>7/12</i>	<i>12:45</i>		<input checked="" type="checkbox"/>	<i>Field Blank</i>	<i>3 3202</i>	<input checked="" type="checkbox"/>	
5	<i>RB</i>	<i>7/12</i>	<i>12:30</i>		<input checked="" type="checkbox"/>	<i>Private Blank</i>	<i>3 3202</i>	<input checked="" type="checkbox"/>	
6									
7									
8									
9									
10									

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
<i>1</i>	<i>175</i>	<i>Randy Smith</i>		<i>7/12</i>	<i>1500</i>	<i>48hr TAT</i>
<i>2</i>						
<i>3</i>						
<i>4</i>						SAMPLER'S SIGNATURE <i>Randy Smith #5855</i>

# CHAIN-OF-CUSTODY RECORD

O. H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3528

PROJECT NAME		PROJECT LOCATION		NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)	REMARKS																
PROJECT NO.	PROJECT CONTACT	PROJECT TELEPHONE NO.	CLIENT'S REPRESENTATIVE			PROJECT MANAGER/SUPERVISOR																
SAMPLE NUMBER	DATE	TIME	COMP			GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)															
Camp Lejeune D.O. 6Z		Camp Lejeune, N.C.		1080	PCB																	
16866	Alan Whitt		(910) 457-2599																			
VANW Marshburn		Jim Dunn / Alan Whitt																				
1	CLJ62-S-001	11/21	0952				X	Base	1-4oz	X												
2	CLJ62-S-002	11/21	0955				X	sidewall	1-4oz	X												
3	CLJ62-S-003	11/21	1001				X	Base	1-4oz	X												
4	CLJ62-S-004	11/21	1003				X	sidewall	1-4oz	X												
5	CLJ62-S-005	11/21	1005				X	sidewall	1-4oz	X												
6	CLJ62-S-006	11/21	1020				X	Base	1-4oz	X												
7	CLJ62-S-007	11/21	1022				X	Base	1-4oz	X												
8	CLJ62-S-008	11/21	1025		X	Side wall	1-4oz	X														
9	CLJ62-S-009	11/21	1030		X	sidewall	1-4oz	X														
10	CLJ62-S-010	11/21	1035		X	sidewall	1-4oz	X														

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-10	ROCON R. Acan	FED EX # 6921490985	11/21	1700	
2						
3						
4						

SAMPLER'S SIGNATURE *ROCON R. Acan*

# CHAIN-OF-CUSTODY RECORD

Field

166466

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME <b>Camp Lejeune D.O. 62</b>		PROJECT LOCATION <b>Camp Lejeune, N.C.</b>		NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)  <b>(8080) PCB</b>		
PROJ NO <b>16866</b>	PROJECT CONTACT <b>Alan Whitt</b>	PROJECT TELEPHONE NO. <b>(910) 451-2599</b>					
CLIENT'S REPRESENTATIVE <b>VANN Marshburn</b>		PROJECT MANAGER/SUPERVISOR <b>Jim Dunn / Alan Whitt</b>					
ITEM NO	SAMPLE NUMBER	DATE	TIME			COMP	GRAB
1	CL562-S-010D	11/21	1035		X	Duplicate Sidewall	1-4oz X
2	CL562-S-011	11/21	1040		X	Sidewall	1-4oz X
3	CL562-S-012	11/21	1047		X	Sidewall	1-4oz X
4	CL562—FB	11/21	1053		X	Field Blank	3-1L X
5	CL562—RB	11/21	1114		X	Rinsate Blank	1-1L X
6							
7							
8							
9							
10							

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-5	<i>Wesley R. Acorn</i>	FEDEX # 6921490984	11/21	1000	
2						
3						
4						SAMPLER'S SIGNATURE <i>Wesley R. Acorn</i>

**Appendix G**  
**Field Screening Summary Report**

January 21, 1996

## **FIELD SCREENING SUMMARY REPORT**

### **On-Site Delineation of Pesticides Contaminated Soils Delivery Order No. 62 Camp Lejeune, NC**

The objectives of this phase of the Camp Lejeune project are as follows:

- 1) Determine extent of pesticide/PCB-contaminated soil before excavation
- 2) Confirm contaminated soil removal

In order to meet these objectives, OHM mobilized personnel and analytical equipment to the site. Three hundred and sixty-one soil samples were collected and analyzed by the on-site laboratory on this phase of the Camp Lejeune project.

The samples for the on site screening were collected by utilizing a 10x10 ft. grid system. Grab samples were collected at each point 6 inches below the ground surface and analyzed by the on-site laboratory. Grab samples were analyzed on the grid system in all directions until results indicated that the soil did not contain any of the Contaminants of Concern at levels above the remediation goals. The soil was then excavated and grab samples were then taken at 6 inches below the surface to ensure that all contaminated material had been removed. The analytical activities on-site should be considered only as a screening process. Once the samples were determined by the on-site lab to be below the action limits, confirmation samples were sent to the off-site lab.

On-site samples were prepped for analysis using a simplified sample extraction and cleanup procedure. They were subsequently analyzed for the target analytes using a Hewlett-Packard 5890 GC equipped with an Electron Capture Detector (ECD) per SW-846 method 8080.

The sample prep method consisted of a two stage liquid/liquid extraction from hydrated methanol to hexane followed by a mini-column liquid chromatographic cleanup step. This method is cited from Volume II of the "Fifth Annual Waste Testing and Quality Assurance Symposium Proceedings", July 24-28, 1989 publication.

January 21, 1996

In order to check the performance of this method, a standard reference material containing 4,4'-DDD (Pesticides in Soil, Lot No. 332) from Environmental Resource Associates was extracted on 5/10/95 and 5/23/95, put through the cleanup process, and analyzed on the GC-ECD system. The recovery results are shown in Table 1.

**Table 1**  
**Standard Reference Material**  
**Recovery Results**

Date Analyzed	Contaminant of Concern	Conc. Found (ug/kg)	True Conc. (ug/kg)	Acceptable Range (ug/kg)	% Recovery
5/10/95	4,4'-DDD	413	408	( 196-490 )	101.2 %
5/23/95	4,4'-DDD	515.2	408	( 196-490 )	126.2 %

Initial calibration curves were run on 5/2/95 and 5/15/95. The second initial calibration curve, run on 5/15/95, was due to a power outage. All calibration curves produced correlation coefficients >0.995. Continuing calibration checks (CCC) were analyzed daily prior to analyzing samples. The CCC consists of analyzing the midpoint standard (250 ng/ml). Acceptable range of deviation from the true value were set at 80-165 %. This range was set on the conservatively high side in order to ensure that no results would be deceptively below the action levels on this project. All CCC were within the field laboratory criteria.

Method blanks were analyzed daily following the CCC and prior to analyzing samples. Analytes of interest were non-detected in all method blanks analyzed. Matrix spikes and matrix spike duplicates (MS/MSD) of DDT and DDD were analyzed to check the percent recovery of these compounds. Also a blank method spike was performed with DDT to evaluate the method.

**Appendix H**  
**QC Documentation**

2

**QC MEETING MINUTE**  
**NAVY LANTDIV CONTRACT N62470-93-D-3032**  
**DELIVERY ORDER 0015**

<b>Attendees :</b>	<b>Jim Dunn</b>	<b>OHM Project Manager</b>	<b>JANUARY 24, 1994</b>
	<b>Randy Smith</b>	<b>OHM Site Supervisor</b>	
	<b>Michael Haugen</b>	<b>OHM Project Accountant</b>	
	<b>Vann Marshbern</b>	<b>ROICC</b>	
	<b>John Cotton</b>	<b>ROICC</b>	
	<b>Thomas Morris</b>	<b>IRD/EMD</b>	
	<b>Brent Rowse</b>	<b>IRD/EMD</b>	

- \* No written confirmation received from NESSA on Landfarming proposal for soils. OHM received North Carolina Landfarming Guidelines from Tom Morris.
- \* OHM recommended testing one composite sample of soils from the newly discovered disposal area in Lot 203, with the same protocol as AOC 2 soils. Estimated cost \$2500 dollars for 14 day turn around time. Tom Morris and Vann Marshbern agreed. OHM will proceed with sample collection and analysis.
- \* Ground Water Treatment Plant start up procedures need further review from the Base and EPA Region IV (Charles Osborne).
- \* Telephone and Water connections to the treatment plant may be delayed. OHM will look at treated effluent use for latrine, waste basin and general plant waste water.
- \* Randy Smith gave a brief progress report of current site activities. Treatment plant site clearing and grubbing should be completed by 1/27/95.
- \* Vann Marshbern asked if LANTDIV would sign off on OHM drawings. Jim Dunn to pursue answer.
- \* Building redesign was presented by Jim Dunn. Comments were: Plain not split face block; Single ply or modified bitumen roofing; Exterior color to be Currier Creme 40YY83/107 as manufactured by Glidden or equal.
- \* Unit heaters required not to prevent freezing but to prevent moisture buildup during winter months. Removal of ducting is encouraged.
- \* Items to check based upon recent start up of treatment plant at Hadnot Point include: Instrument interconnections, siphoning of backwash, uncontrolled well pumping, pressure regulators, roof access for exhaust, maintenance access to all tank manholes, OSHA compliance

on all walkways, platforms and ladders. Transformers should have five stator hookup with meter base, light ballast to be zero degrees. Recheck analytical results from deep wells (Iron content is suspect). Experience says excess iron in all wells.

- \* Upon receipt, send hard copies of analytical results to John Cotten.
- \* O U 2 has several washouts which need to be repaired in Spring when additional equipment is onsite.
- \* Base has not awarded Tank Farm Demolition contract due to lack of funds.
- \* Jim Dunn presented overview of RAC proposal for D.O.62, O U 1 pesticide and PCB contaminated soil removal.

CC: LANTDIV (Linda Saksvig, Code 18231)  
LANTDIV (Jerry Haste, Code 0524)  
OHM Norcross, GA (Jim Dunn)  
IRD/EMD (Neal Paul)  
QA/QC (Chuck Lawrence)

Sincerely,

Randy Smith

3

**QC MEETING MINUTE S**  
**NAVY LANTDIV CONTRACT N62470-93-D-3032**  
**DELIVERY ORDER 0015**

S  
D

**Attendees :** Jim Dunn  
 Randy Smith  
 Michael Haugen  
 Vann Marshbern  
 John Cotton  
 Thomas Morris  
 Brent Rowse

**OHM Project Manager**  
**OHM Site Supervisor**  
**OHM Project Accountant**  
**ROICC**  
**ROICC**  
**IRD/EMD**  
**IRD/EMD**

JANUARY 24, 1994

NEESA

- \* No written confirmation received from ~~NEESA~~ on Landfarming proposal for soils. OHM received North Carolina Landfarming Guidelines from Tom Morris.
- \* OHM recommended testing one composite sample of soils from the newly discovered disposal area in Lot 203, with the same protocol as AOC 2 soils. Estimated cost \$2500 dollars for 14 day turn around time. Tom Morris and Vann Marshbern agreed. OHM will proceed with sample collection and analysis.
- \* Ground Water Treatment Plant start up procedures need further review from the Base and EPA Region IV (Charles Osborne).
- \* Telephone and Water connections to the treatment plant may be delayed. OHM will look at treated effluent use for latrine, waste basin and general plant waste water.
- \* Randy Smith gave a brief progress report of current site activities. Treatment plant site clearing and grubbing should be completed by 1/27/95.
- \* Vann Marshbern asked if LANTDIV would sign off on OHM drawings. Jim Dunn to pursue answer.
- \* Building redesign was presented by Jim Dunn. Comments were: Plain not split face block; Single ply or modified bitumen roofing; Exterior color to be Currier Creme 40YY83/107 as manufactured by Glidden or equal.
- \* Unit heaters required ~~not~~ <sup>both</sup> to prevent freezing <sup>AND</sup> but to prevent moisture buildup during winter months. Removal of ducting is encouraged.
- \* Items to check based upon recent start up of treatment plant at Hadnot Point include: Instrument interconnections, siphoning of backwash, uncontrolled well pumping, pressure regulators, roof access for exhaust, maintenance access to all tank manholes, OSHA compliance

on all walkways, platforms and ladders. Transformers should have five stator hookup with meter base, light ballast to be zero degrees. Recheck analytical results from deep wells (Iron content is suspect). Experience says excess iron in all wells.

- Upon receipt, send hard copies of analytical results <sup>from AOC 2-6</sup> to John Cotten.
- O U 2 has several washouts which need to be repaired in Spring when additional equipment is onsite.
- Base has not awarded Tank Farm Demolition contract due to lack of funds.  
REQUEST FOR
- Jim Dunn presented overview of RAC proposal for D.O.62, O U 1 pesticide and PCB contaminated soil removal.

CC: LANTDIV (Linda Saksvig, Code 18231)  
LANTDIV (Jerry Haste, Code 0524)  
OHM Norcross, GA (Jim Dunn)  
IRD/EMD (Neal Paul)  
QA/QC (Chuck Lawrence)

Sincerely,

Randy Smith

**QC MEETING MINUTES**  
**NAVY LANTDIV CONTRACT N62470-93-D-3032**  
**DELIVERY ORDER 0015**

Attendees :	Randy Smith	OHM Site Supervisor	April 11, 1995
	Michael Haugen	OHM Project Accountant	
	Jim Dunn	OHM Sr. Project Manager	
	Vann Marshburn	ROICC	
	Neal Paul	IRD/EMD	

**WORK IN PROGRESS:**

Fencing for WWTP connection to Piney Green Road will be in place by mid day Thursday, April 13, 1995. Safety fencing has been placed while permanent poles are being set in concrete. Drive thru gate will be included. Work to begin on effluent line construction from out fall to Manhole #4 on 4/17/95.

Injection air broke through bentonite surrounding the slotted portion of the horizontal well on Thursday 4/6/95 and adjustments were made to well vacuum and injection pressure. No other problems noted. SVE system running smoothly. Randy reviewed data with Vann and Neal on SVE comparisons of UG/L to UG/kg. Sampling calculation are being prepared by Andrew Collins which compare soil levels to vapor levels. Jim Dunn will provide information from the sampling in his monthly report. Included in the report will be pounds of containments removed, anticipated, and remaining levels.

Jim and Vann reviewed different sections of WWTP schedule. Discussions were held concerning operation of plant through September 1995 and impact on base budgeting for D.O. 15.

\* Vann Marshburn would like OHM to handle the operations of the plant until the end of September 1995 so the base personnel can start with a fresh budget year. Jim Dunn assured him it would be no problem extending the time period.

\* Vann Marshburn asked OHM to remember the erosion control around Wallace Creek when work gets close to that area. Vann would like to review the area when the control methods are in place. Randy will work that through John Cotten and Vann. State representative likes check dams.

\* Based on analytical results, approval granted for placing material from roll-off (well drilling and mud) on top of SVE site. Jim Dunn suggested the material be placed between the extraction piping.

\* NEESA received the formal bid for Job 15526 land farming of soils on Lot 203. Approval to go ahead was given. OHM will prepare all paper work with intent to permit in North Carolina for submittal. Included with the information will be a letter explaining that we do not need the permit because of the Superfund status of the project site. Jim Dunn will include Neal and Vann in the preparation of the letter and package prior to sending it to North Carolina.

\* Jim Dunn is prepared to turn over Manifest and supporting data for approval to EMD for Delivery Order 0062, OU1. Neal suggest the AOC 4 (approx. 50 cubic yards) could be placed on base. Analytical data supports this recommendation. OHM took six grab samples, composite and sent one sample to be tested. The cost savings could be 4 to 1 if onsite placement can be permitted.

CC: LANTDIV (Linda Saksvig, Code 18231)  
LANTDIV (Jerry Haste, Code 0524)  
OHM Norcross, GA (Jim Dunn)  
IRD/EMD (Neal Paul)  
QA/QC (Chuck Lawrence)

Sincerely,  
  
Randy Smith

**QC MEETING MINUTES**  
**NAVY LANTDIV CONTRACT N62470-93-D-3032**  
**DELIVERY ORDER 0015**

Attendees :	Randy Smith	OHM Site Supervisor	April 18, 1995
	Alan Primeaux	OHM Project Accountant	
	Vann Marshburn	ROICC	
	John Cotton	ROICC	
	Neal Paul	IRD/EMD	

**OPERATIONS IN PROGRESS:**

Neal wants to explore possibility of buying a Gas Chromatograph.

- Van stated that the statements made last week by Jim Dunn were incorrect in that multicontaminated soils could not be incinerated.
- Van stated that OHM proceed in cleaning (OU-1) AOC-4. Van directed OHM to grid out each AOC in 5 foot grids, then run analysis.
- Van stated that OHM is to delineate the other AOC areas by the same method.

Randy stated that the SVE system is running 24 hours per day with out any problems.

Van requested OHM to provide Neal Paul with data from the SVE system by at the next QC meeting on 4/25/95.

Neal directed OHM not to talk to the federal or state regulatory agencies without first going through himself, Van or Linda in Norfolk, VA.

Randy stated that OHM is working on effluent discharge line an also setting outfall structure and piping to manhole #4. NE Construction is bringing up borrow material in 12" lifts under the WWTP.

Van stated that any overtime on weekends or excessive overtime needs to be approved, by himself, before the actual work is performed.

Van directed OHM to sample the NEESA soils again to determine whether or not it needs to be bioremediated for treatment.

Sincerely,

Randy Smith

CC: LANTDIV (Linda Saksvig, Code 1823<sup>2</sup>1)  
LANTDIV (Jerry Haste, Code 0524)  
OHM Norcross, GA (Jim Dunn)  
IRD/EMD (Neal Paul)  
QA/QC (Chuck Lawrence)

**QC MEETING MINUTES**  
**NAVY LANTDIV CONTRACT N62470-93-D-3032**  
**DELIVERY ORDER 0015**

Attendees :	Randy Smith	OHM Site Supervisor	May 2, 1995
	Jim Dunn	OHM Project Manager	
	John Cotton	ROICC	
	Vann Marshburn	ROICC	
	Neal Paul	IRD/EMD	

- Randy opened meeting with a status report for O.U.1. Today we will be sampling AOC-1; yesterday we sampled AOC-2. The gas chromatograph will run samples tonight. Analysis rate will be +/- 25 samples per day. OHM & EMD will meet with forestry at 8:30 5/3/95 to get equipment and material moved out of AOC-3.
- After analytical data is available and plotted, OHM is to recommend a course of action to the ROICC.

SVE running well - Serviced generator on 4/28/95 and 2000 lbs of carbon was added to filter.

Northeast Construction awaiting delivery of reinforcing steel. Subgrade prepared, forms being constructed.

OHM was asked to look at a means of providing a pumping station at the new groundwater treatment plant to offload drums, tanks, or tankers which would be loaded with contaminated water to be treated by the plant.

Vann asked that the tank demolition contractor had not started work at Camp Geiger.

Plan to meet Thursday morning 5/11/95 to discuss the biocell. Attendees will include base operating personnel, EMD, ROICC, and OHM.

Next year two old wastewater plants will be demolished. Neal and Vann will look into the possibility of using drying beds for the additional soil treatment facilities.

The Technical Review Committee meeting has been changed to 5/10/95 from 13:00 to 15:00 hrs.

An admiral will be onsite 5/9/95 between 08:00 and 08:30 to review the SVE installation.

Vann will look into additional phone service.

CC: LANTDIV (Linda Saksvig, Code 18231)  
LANTDIV (Jerry Haste, Code 0524)  
OHM Norcross, GA (Jim Dunn)  
IRD/EMD (Neal Paul)  
QA/QC (Chuck Lawrence)

**QC MEETING MINUTES**  
**NAVY LANTDIV CONTRACT N62470-93-D-3032**  
**DELIVERY ORDER 0015**

Attendees :	Jim Dunn	OHM Sr. Project Manager	May 9, 1995
	Michael Haugen	OHM Project Accountant	
	Vann Marshburn	ROICC	
	John Cotton	ROICC	
	Neal Paul	IRD/EMD	
	Gena Townsend	EPA Region IV	
	Kate Landman	LANTDIV	
	Jerry Haste	COTAR (By Telephone)	

- Status of O.U.1 sampling and analyses - AOC 2 has pesticides in excess of the action levels in all but one sample. Levels are such that "clean" is anticipated at a depth of 1 foot. Further sampling and analysis will be conducted to verify prior to excavation. AOCs 1 & 4 indicated positive for PCBs but data is suspect since all samples tested positive. Sr. Project Chemist Terry Whitt will be onsite tomorrow to assist in trouble shooting AOC 4 also tested positive for pesticides in 8 of 18 samples AOC 3 is currently on the gas chromatograph and results should be available Thursday afternoon
- \* Northeast Construction is to test the current fill material to ascertain whether it can be substituted for the underslab material specified

Northeast Construction has proposed to drill the Detail B anchor bolts into the base slab and pour them in the raised portion of the pad. This proposal would be at no cost and is found acceptable.

Northeast Construction has requested permission to pour footings under the interior masonry walls rather than a thickened slab. This construction method would permit wall construction prior to pouring the slab and would be performed at no additional cost. This proposal was found acceptable.

OHM discussed adding an additional office trailer to the site to facilitate engineering and as-built activities. This unit would be installed parallel to the existing office trailer and connected with a wooden walkway. Final approval will be granted after meetings between Vann, Jerry and Jim on May 22 and 23.

The ROICC office would like to meet with Northeast and their Mason prior to the start of construction activities. Tentative meeting date is during the week of May 22

The ROICC office would like to attend a pre-construction meeting with electrical subcontractor Southerland Electric and Donnie Guy prior to the commencement of construction activities.

Transformer testing will occur at the General Electric facility in Shreveport, La. on May 22, 1995. LANTDIV representative Peyton Glenn and OHM representative Rob Keskonis will witness the testing program.

The ROICC office would like to meet with Northeast's roofing subcontractor approximately two weeks prior to commencement of construction activities. Subjects will include penetration flashing and samples of proposed roofing materials.

OHM is to plan on supplying plant training including an instructional video for the groundwater treatment plant.

Telephone service - OHM will have three lines available to its offices by May 18, 1995. Service to the new treatment plant building should be available from Piney Green Rd. Final routing will be available at a later date.

The ROICC office will bring plans for future water and sewer service to the treatment plant building to OHM's office tomorrow for incorporation into OHM's planning and construction

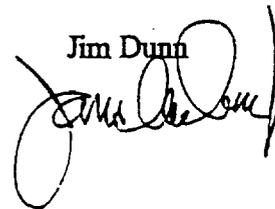
Jerry Haste and Linda Saksvig will be at MCB Camp Lejeune on the afternoon of May 22 and all day on May 23 for meetings and updates on the progress of all ongoing delivery orders.

Kate Landman will be taking on the additional duties of Linda Saksvig's delivery orders. Linda has received a well deserved promotion to supervisor .

CC: LANTDIV (Linda Saksvig, Code 18231)  
LANTDIV (Jerry Haste, Code 0524)  
OHM Norcross, GA (Jim Dunn)  
IRD/EMD (Neal Paul)  
QA/QC (Chuck Lawrence)

Sincerely,

Jim Dunn



**PRODUCTION ACTIVITIES REPORT  
CAMP LEJEUNE  
LANTDIV Contract N62470-93-D-3032**

May 23, 1995

Attendees: Jerry Haste, COTR  
Vann Marshburn, ROICC  
John Cotton, ROICC  
Neal Paul, IRD/EMD  
Jim Dunn, OHM Project Manager  
Chuck Lawrence, SWEC QC

Delivery Order 62:

Jim Dunn reviewed the status of AOC's 1-4. He also discussed transportation and disposal costs for PCB and pesticide contaminated soils. Cleanup of AOC's 2-4 can be accomplished with present funding.

Neal Paul will verify whether or not a less stringent action limit than .37 micrograms/kilogram can be applied to AOC 1 for PCB's. Excavation and loadouts from AOC 1 have been halted, pending an answer to this question.

Jim Dunn will provide justification for a Gas Chromatograph (GC) to be purchased by Camp Lejeune.

Delivery Order 15:

Jim Dunn presented data on SVE operations to date. Data presented was based on samples taken from wells, not from probes.

Vann requested OHM pull soil samples after three months of operation and run on the on site GC.

Neal Paul plans to examine SVE data on an as submitted basis.

Vann noted that he does not think that the Groundwater Treatment Plant will be operational by October. He also mentioned concerns for the quality of masonry work and recommended strongly that we monitor the masonry contractor very closely.

Delivery Order 44:

OHM expects to begin work at Camp Geiger at the end of June.

Jim Dunn stated that this job involved only TPH-contaminated soils.

Delivery Order 23:

Jerry Haste asked about the Closeout Report for this delivery order. Jim Dunn stated that this report was submitted in January 1995. Jerry asked Vann to prepare a final inspection letter and CCASS evaluation.

**DELIVERY ORDER 62**

- 1) The CQ Engineer will prepare and submit a Contractor Quality Control Report, in accordance with the format established in contract N62470-93-D-3032, upon completion of each site visit.
- 2) The QC Engineer will prepare and submit QC Meeting Minutes in accordance with the format established in contract N62470-93-D-3032 whenever a meeting is conducted with the ROICC concerning quality issues related to this delivery order.
- 3) Due to the limited nature of the quality activities and meetings associated with this delivery order, the Site Supervisor will not be expected to submit CQC Reports or QC Meeting Minutes when the QC Engineer is not present at the site.
- 4) As-built drawings will be maintained at the OHM Norcross office.

**PRODUCTION MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D-3032  
MCB CAMP LEJEUNE**

June 6, 1995

Attendees :

Jim Dunn	Project Manager
Van Marshburn	ROICC
John Cotton	ROICC
Neal Paul	IRD/EMD
Chuck Lawrence	SWEC
Mike Haugen	OHM

• DO 62:

Vann stated that Linda Saksvig informed him that soil from AOC 1 could go to a Subtitle D (nonhazardous) landfill. Jim asked to confirm this with Linda. When called, Linda stated that she would check and verify if a Subtitle C or a Subtitle D landfill was to be used.

An Explanation of Significant Differences is pending for the action level change for AOC 1 from .37 mg/kg to 10 mg/kg.

Jim Dunn estimates there are 54 tons still to be excavated from AOC 3. The overall tonnage removed from all the AOC's will be 552 tons vs. the 365 tons originally estimated. The yardage estimates remain accurate, but the amount of stone in the soil at AOC 3 contributed to the greater weight.

Jim Dunn stated that the overall total for the delivery order will be very close to the budgeted total of \$737,000. T&D costs will be \$25K to 40K less if AOC 1 soils are not incinerated.

**General:**

Still waiting on a delivery order for DO78, Bldg 25, TCE tanks. Work plan preparation will commence upon receipt of delivery order and should require approximately one month to perform.

**CC: Vann Marshburn, ROICC  
Jerry Haste, COTR  
Jim Dunn, Senior Project Manager  
Mike Gilman, QA Manager  
Chuck Lawrence, QC Engineer**



D.O. 62

1. Randy stated that OU1 backfill should be complete by the end of the day for AOCs 2,3, and 4. Van asked if all information regarding analytical results will be in the final report. Randy stated that all confirmation results will be submitted in final report form in accordance with the work plan. Van stated that he will review backfill operations early next week.

QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D-3032  
MCB CAMP LEJEUNE

August 1, 1995

Attendees:	Vann Marshburn	ROICC
	John Cotton	ROICC
	Neal Paul	IRD/EMD
	Jim Dunn	OHM Project Manager
	Randy Smith	OHM Superintendent
	Mike Haugen	OHM Project Accountant
	Dave Mueller	OHM Project Accountant
	Ed Baker	SWEC QC

A QC Meeting was conducted at 1300 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.

FAXED  
8-8-95

FAXED

CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Katherine Landman, Code 18232)  
LANTDIV (Lance Laughmiller)  
QC Manager (Mike Gilman)

D.O. 62

1. Vann inquired about status of AOC1. Neal stated that it was being held up until it is presented with other RODs for the general's signature. If this is a problem, please inform Neal and he will present the ESD for AOC1 alone.

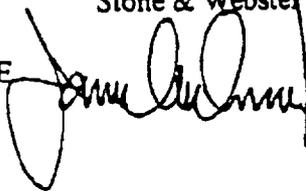
# WEEKLY PROGRESS MEETING NAVY LANTIV CONTRACT N 62470-93-D-3032

AUGUST 15, 1995

**FAXED**  
8-19-95

Attendees:	Vann Marshburn	AROICC
	Jim Dunn	OHM Project Manager
	Alan Whitt	OHM Construction Manager
	Randy Smith	OHM Site Supervisor
	Mike Haugen	OHM Project Accountant
	Todd Stamm	OHM Project Accountant
	Ed Baker	Stone & Webster QC Engineer

Submitted By: James A. Dunn, Jr., P.E.



**General:**

MCB Camp Lejeune is currently in Condition 3 due to the approach of hurricane Felix. Vann Marshburn advised that the conditions at the base are as follows:

- Condition 3            Pick up what will blow - be prepared to tie down materials and equipment - basically be alert to the possibility
- Condition 2            Tie everything down - board windows - stay in contact with emergency coordinator
- Condition 1            Base closure

**Delivery Order 15 - Job 16032 - Groundwater Treatment Plant**

1. Clean up building construction site - debris is getting out of hand. Another contractor was shut down last Friday for improper housekeeping.
2. Building status - installing masonry units between the joists - plan to grout Thursday  
Plan to commence roof deck installation Monday 8/21/95
3. The ROICC Office needs copies of all Northeast change orders to date and advance notice of any future change requests for any subcontractors prior to approval by OHM.

• **Delivery Order 62 - Job 16866 - PCB and Pesticide Contaminated Soils**

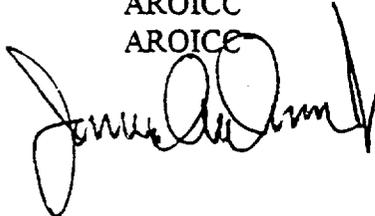
1. The Modification request has not been received as of 1 p.m. this date
  2. Lt. Cheryl Hansen will not be officially available late September. Vann will try to free her schedule to attend these Tuesday Progress Meetings.
-

**FAXED**  
9-7-95

**WEEKLY PROGRESS MEETING**  
**NAVY LANTIV CONTRACT N 62470-93-D-3032**

SEPTEMBER 6, 1995

Attendees:	Vann Marshburn	AROICC
	Jim Dunn	OHM Project Manager
	Alan Whitt	OHM Site Supervisor
	Neal Paul	EMD/TRD
	Kate Landman	LANTDIV RPM
	Junior Johnson	AROICC
	Bill Ward	AROICC



**General:**

Initial discussion centered around problems with North and South Treatment Plants built by O'Brien and Gere for contaminated groundwater. Current persisting problems include sand entering the treatment train from the wells and calcium content of the influent. Don Joiner of Baker Environmental together with Ron Crowson and Jerome Hall of OB & G will jointly investigate the problems today and provide recommendations in the morning. Ron will be inserting a camera into the well to determine slot sizing and to look through the slots at the formation to try to determine the cause of sand particles flowing into the wells.

Lt. Cheryl Hansen was unable to attend today's meeting due to a scheduling conflict. Vann is handing off all RAC Contract work to Lt. Hansen and her availability will be vastly improved in the near future.

Neal Paul will be out for the rest of the week.

Vann led a discussion regarding preparation of future modification requests. OHM is to provide a summary estimate that includes labor, equipment, third party services and materials and include supervision and overhead items in a format that is user friendly such that the construction office can verify/check that the request meets their expectations. The formal complete estimate in the WBS system will be used to track the expenditure and should be an inclusion or attachment to the above described summary.

**Delivery Order 62 - Job 16866 - PCB and Pesticide Contaminated Soils**

1. The Explanation of Significant Differences(ESD) is on the Base Commander's desk for signature. The news release has been prepared and is at the printers awaiting instructions.

**FAXED**  
9-13-95

**QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D03032  
MCB CAMP LEJEUNE**

September 12, 1995

<b>Attendees:</b>	Vann Marshburn	ROICC
	Capt. Cheryl Hanson	ROICC
	John Cotton	ROICC
	Neal Paul	IRD/EMD
	Alan Whitt	OHM Site Superintendent
	Mike Haugen	OHM Project Accountant
	Dave Mueller	OHM Project Accountant
	Chuck Lawrence	SWEC QC

A QC Meeting was conducted at 1300 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.

  
Chuck Lawrence

CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Katherine Landman, Code 18232)  
LANTDIV (Lance Laughmiller)  
Jim Dunn (OHM Proj Mngr)  
Mike Gilman (Mike Gilman)

• **D.O. 62 - Job 16866 - PCB and Pesticide Soils**

1. Final cleanup at AOC 1 is waiting on a signature from the Commanding General on the revised Action Level.

QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D-3032  
MCB CAMP LEJEUNE

October 3, 1995

Attendees:	Vann Marshburn	ROICC
	John Cotton	ROICC
	Lt. Cheryl Hansen	ROICC
	Neal Paul	IRD/EMD
	Alan Whitt	OHM Superintendent

**FAXED**  
10-5-95

A QC Meeting was conducted at 1300 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.

CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Katherine Landman, Code 18232)  
LANTDIV (Lance Laughmiller)  
QC Manager (Mike Gilman)

D.O. 62

1. Vann asked when OHM plans to start on AOC-1. Alan said when OHM finishes at Camp Geiger.

QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D-3032  
MCB CAMP LEJEUNE

October 10, 1995

Attendees: Vann Marshburn	ROICC
John Cotton	ROICC
Tom Morris	IRD/EMD
Alan Whitt	OHM
Randy Smith	OHM

**FAXED**  
10-17-95

A QC Meeting was conducted at 1300 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.

CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Katherine Landman, Code 18232)  
LANTDIV (Lance Laughmiller)  
QC Manager (Mike Gilman)

D.O. 62

- 1. A. Whitt states that OHM needs a letter identifying the source of the PCB's for disposal. T. Morris asks what needs to be included in the letter. A. Whitt says that it needs to be like the one generated for the Carbon disposal.

QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D03032  
MCB CAMP LEJELNE

October 24, 1995

Attendees:	Vann Marshburn	ROICC
	Lt. Cheryl Hanson	ROICC
	John Cotton	ROICC
	Alan Whitt	OHM Site Superintendent
	Randy Smith	OHM Supervisor
	Chuck Lawrence	SWEC QC

A QC Meeting was conducted at 1300 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.

  
Chuck Lawrence



CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Katherine Landman, Code 18232)  
LANTDIV (Lance Laughmiller)  
Jim Dunn (OHM Proj Mngr)  
Chuck Lawrence (SWEC QC)  
Mike Gilman (SWEC QC Manager)

D.O. 62 - Job 16866 - PCB and Pesticide Soils

1. The Commanding General has signed the ROD letter, but another letter is needed concerning the source of the PCB's. (The cause is known to be PCB Transformers).
2. Vann stated that he wants to complete AOC 1 as soon as possible.

QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D-3032  
MCB CAMP LEJEUNE

November 21, 1995

Attendees: John Townsend	EMD
John Cotton	ROICC
Neal Paul	EMD
Lt. Cheryl Hansen	ROICC
Alan Whitt	OHM

A QC Meeting was conducted at 1300 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.

CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Katherine Landman, Code 18232)  
LANTDIV (Lance Laughmiller)  
QC Manager (Mike Gilman)

**FAXED**  
12-1-95

D.O. 62

- A. Whitt said that OHM loaded three trucks this morning and sent to BFI Sampson County Landfill. OHM is shipping confirmation samples to ASC and also running onsite.

QC MEETING MINUTES  
NAVY LANTDIV CONTRACT N62470-93-D-3032  
MCB CAMP LEJEUNE

December 12, 1995

Attendees:	Vann Marshburn	ROICC
	Lt. Cheryl Hanson	ROICC
	John Cotton	ROICC
	Neal Paul	EMD
	Jim Dunn	OHM Project Manager
	Alan Whitt	OHM Site Superintendent
	Chuck Lawrence	SWEC QC

A QC Meeting was conducted at 1330 hours in conjunction with a review of Camp Lejeune Delivery Order production activities. The following are the minutes from this meeting for each delivery order.



Chuck Lawrence

CC: LANTDIV (Jerry Haste, Code 0524)  
LANTDIV (Lance Laughmiller)  
Mike Gilman (SWEC QC Manager)  
Jim Dunn (OHM Proj Mngr)  
Chuck Lawrence (SWEC QC)

- **D.O. 62**

- Backfilling and reseeding are complete. OHM, QC, and John Cotton will perform final walkdown after meeting today (12/12).