

02.08-12/01/95-01728



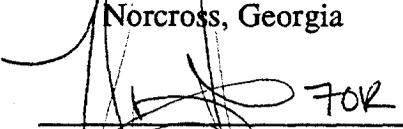
**OHM Remediation
Services Corp.**

**CONTRACTOR'S CLOSEOUT REPORT
TIME CRITICAL REMOVAL ACTION FOR
SURFICIAL METALLIC DEBRIS IN
OPERABLE UNIT 6, SITE 43
MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA**

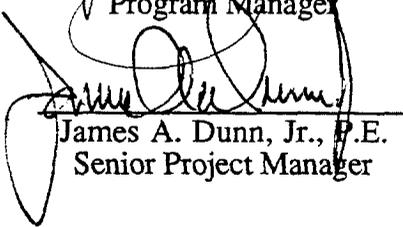
**Contract No. N62470-93-D-3032
Delivery Order 0077**

Prepared by

**OHM Remediation Services Corp.
Norcross, Georgia**



**John P. Franz, P.E.
Program Manager**



**James A. Dunn, Jr., P.E.
Senior Project Manager**

December 1995

OHM Project No. 17417

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EXECUTIVE SUMMARY

During 1995, OHM Remediation Services Corp. (OHM) performed a Time Critical Removal Action for surficial metallic debris in Operable Unit 6, Site 43 at Marine Corps Base Camp Lejeune, North Carolina. OHM's project activities involved the removal of all surficial metallic debris, including empty drums, various scrap metal and an old tank vehicle. Additionally, OHM collected, sampled and shipped off-site four drums (1400 lbs.) of hazardous materials for disposal. Site restoration included smoothing the surface of Site 43 of any large impressions or holes that may have been created during the removal of the old tank vehicle or any other debris.

1.0 INTRODUCTION

OHM has completed all activities as required under LANTDIV RAC Contract No. N62470-93-D-3032, Delivery Order No. 77 - Debris Removal at Site 43 of Operable Unit 6, Marine Corps Base, (MCB) Camp LeJeune, North Carolina, in accordance with the statement of work and NAVFAC Specification No. 05-94-4801.

This Closeout Report has been prepared in accordance with Specification Section 01010, Paragraph 1.3.1.10 and describes how OHM removed debris.

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.

Site 43 is located at Marine Corps Air Station (MCAS) New River to the southeast of the Camp Geiger area (Figure 1). The site is located approximately 1 mile north of the main entrance to MCAS New River and 1 mile west of the main runway. It is a level area approximately 11 acres in size. Site 43 is located east of Agan Street and adjacent to an abandoned sewage disposal facility. Edwards Creek and Straw Thorn Creek form the northern, eastern, and southern boundaries of the site. Marshes are present in and around the site. The site is densely wooded and heavily overgrown and contains various narrow dirt roads.

The following provides a brief description of the field observations prior to the removal of debris.

- The northern portion of the site between Edwards Creek and the northernmost access road contains numerous metal frames, grease cans, paint cans, and an old barbecue pit.
- Metallic debris is located east of and adjacent to the main ring road, south of the easternmost dirt road.
- To the north, east, and south of the small circular road are located numerous fence posts, drums, pails, poles, and other small metallic debris.

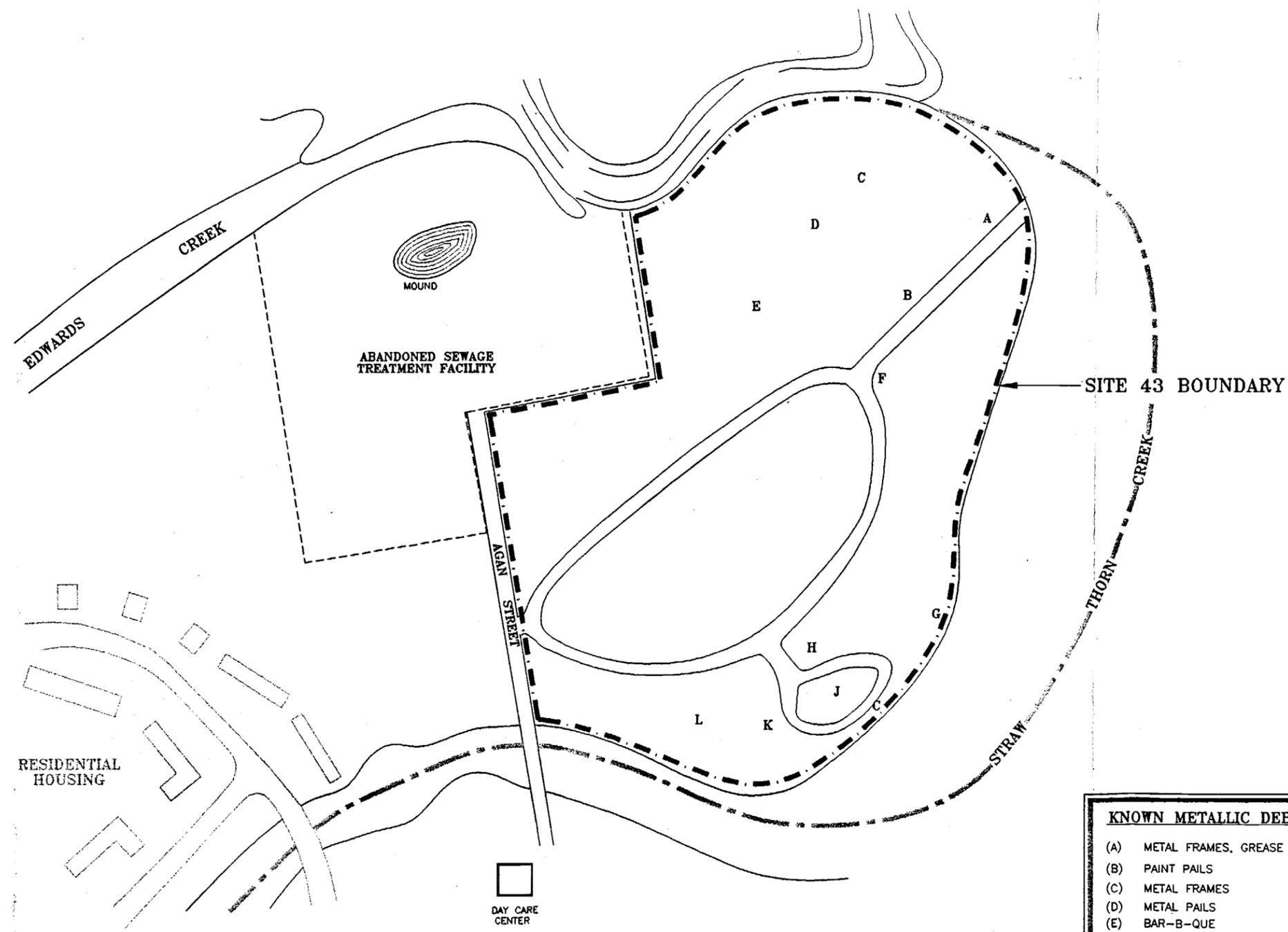


- An old military armored vehicle (tank) is located west of the small circular road and its turret is nearby. Additionally, a metal cabinet is located approximately 100 feet west of the tank. Concrete rubble near the tank has rebar extending out.

A site investigation was conducted in 1991 by Baker Environmental; sampling and chemical analysis was performed on soil, groundwater, surface water and sediments. Five soil borings and three monitoring wells were installed at Site 43 during the Baker investigation. The maximum depth of drilling was 12 feet Below Ground Surface (BGS). The soils encountered generally consist of 1 foot of humic material underlain by gray to brown, medium-grained sand. The humic material may be a result of frequent flooding in the area. The estimated density, calculated from the hammer blows during drilling, ranged from very loose to medium dense, with the majority of the samples falling in the medium dense range. No debris was encountered in any of the soil samples.

Groundwater was encountered during drilling operations at depths ranging from 0.9 to 6.0 feet BGS. Based upon topographic conditions and static water levels, shallow groundwater flow migrates radially from the site in the direction of the Edwards and Straw Horn Creeks. A summary of these findings is outlined in the Remedial Action Work Plan, Site History 1.3.

01728 J01Z



KNOWN METALLIC DEBRIS	
(A)	METAL FRAMES, GREASE PAILS
(B)	PAINT PAILS
(C)	METAL FRAMES
(D)	METAL PAILS
(E)	BAR-B-QUE
(F)	METAL DEBRIS, DRUM
(G)	DRUM, PAILS, FENCE POST, POLES
(H)	DRUMS
(J)	SMALL METAL DEBRIS
(K)	TRACKED VEHICLE (TANK) REBAR STICKING OUT OF CONCRETE RUBBLE
(L)	METAL CABINET

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

SUBMITTED: *[Signature]* DATE: 12/15/95
 APPROVED: *[Signature]* DATE: 12/15/95
 APPROVED: *[Signature]* DATE: 12/15/95

REVISIONS						
ZONE	REV.	DESCRIPTION	BY	DATE	APP.	

FIGURE 1
SITE PLAN
AREA 43
D.O. 77 WORK PLAN

DRAWING IS NOT TO SCALE

2.0 SUMMARY OF ACTION

OHM performed the removal of all surficial metallic debris from Site 43. Included in the removal was all scrap metal, grease and other unidentified cans, empty drums, an old tank vehicle, cabinets, and metal frames. Metallic debris was routed to a recycling recovery facility.

2.1 SUBMITTALS

On May 19, 1995, OHM submitted draft Plans for Delivery Order No. 77. The plans consisted of a Work Plan; Debris Removal, Transportation and Disposal Plan; Contract Quality Control Plan Addendum; Sampling and Analysis Plan and Site-Specific Health and Safety Plan.

The plans provided a brief description of the project objectives, schedule, sampling and analysis requirements, decontamination procedures, site work and debris removal procedures, construction requirements, and storage, transportation, and removal requirements.

The draft plans were reviewed by the Navy and the Architect-Engineer and returned with comments on June 19, 1995. Final plans were submitted on June 28, 1995.

2.2 MOBILIZATION AND SITE PREPARATION

Activities included the erection of caution tape to identify and delineate the work zone and the implementation of all the necessary measures for site drainage, siltation, and erosion control.

2.3 REMOVAL OF SURFICIAL METALLIC DEBRIS

A Pre-construction meeting was held on July 5, 1995 at MCB Camp Lejeune. The area was outlined with caution tape to delineate the work zone and an area for staging surficial metallic pieces was identified.

From July 5 – 11, 1995, surficial metal throughout the site was staged and later placed in a scrap trailer for recycling. The old tank vehicle was dismantled by cutting the tank with a torch into small pieces and transported by Bobcat to a staging area until it was loaded into the scrap metal trailer. Empty drums located at the site were crushed and staged with the other scrap metal pieces. Concrete on-site that had rebar extruding from it was trimmed of the rebar and the rebar pieces were staged with other scrap metal. Unidentified cans were sampled for analysis and placed in drums for disposal. Upon completion of the removal of debris, a Bobcat was used to smooth out areas where larger pieces of debris were removed along with the area where the old tank vehicle was located.

The surficial metal collected on July 13, 1995, by Southern Metals Recycling Inc. totaled 14,660 lbs. A copy of the weight ticket will be found in Appendix D.



2.4 SITE RESTORATION

Upon completion of surficial metal debris removal, the site was lightly regraded to original grade. The regrading consisted of leveling the site with a Bobcat with no backfill material needed. With the minimal disturbance of the site reseeding was not needed and was not performed.

3.0 FINAL HEALTH AND SAFETY REPORT

3.1 MOBILIZATION AND SITE PREPARATION

The site preparation for site 43 at Camp Lejeune, North Carolina, included the following:

- Mobilization and electrical connection of the on-site command center
- Placement of porta-john in a predesignated location in accordance with OSHA regulations
- Prior to the start of on-site operations, all on-site OHM personnel read, understood and signed the OHM 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 surficial metal debris removal from site 43 at Camp Lejeune, North Carolina, included:

- Removal of all surficial metallic debris
- Sample and disposal of unidentified cans
- Crushing of empty drums
- Site restoration

The task of surficial metallic debris removal was accomplished using field personnel and a Bobcat. This task was completed in EPA Level D protective clothing which required each employee to wear a hard hat, safety glasses, cotton work gloves and steel toe shoes. Safety issues stressed during the task were good housekeeping, heat stress and appropriate tools for each task.

A solid sample was taken from the unidentified cans. Protective clothing required for this task included tyvek, sample gloves, hard hat, steel toe shoes, and vinyl booties. Safety issues stressed during work activities included good housekeeping and heat stress.

Site restoration was performed to level the surface area of any large holes that may have formed during the removal of the old tank vehicle. A Bobcat was used to perform this operation. This task 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

During all site activities, continuous air monitoring was performed using a Photoionization detector and a mini-ram. The air monitoring readings were documented and the results indicated that no employee was overexposed to airborne concentrations of the contaminants of concern.

3.4 TRAINING REQUIREMENTS

OHM 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

The record documents submitted to the Navy Technical Representative for Delivery Order 77 include the remedial action work plan, the site safety plan, and the sampling and analysis plan as well as the Contractor's Closeout Report. Documentation associated with quality control is located in Section 8.0.

5.0 FIELD CHANGES

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:

- **Bobcat**
A Bobcat was used instead of winch truck and low boy. The winch truck was going to be used to remove the old tank vehicle, instead the old tank was dismantled on-site and the pieces were carried via the Bobcat to a roll-off bin. Because of this procedure, the low boy was not used for transporting the old tank.
- **Grease Can**
No grease cans were discovered on the site as speculated in the proposal.

6.0 SUMMARY OF CHEMICAL TESTING

Conventional, metals, organics and RCRA TCLP leachate parameter analysis was performed on the solids removed from cans (paint) on Site 43.

These samples were shipped by Fed Ex to Analytical Services Corp. in Findlay, Ohio. Analytical data is contained in Appendix G.

7.0 OFF-SITE DISPOSITION OF MATERIAL

Four hazardous waste drums destined for disposal were transported by a licensed hazardous waste hauler (ThermalChem). The four drums were loaded, transported and weighed at the disposal facility. Copies of the hazardous waste manifests are located in Appendix B, disposal certification is found in Appendix C.

8.0 QUALITY CONTROL SUMMARY

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 to the ROICC by the Site Supervisor.

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
Weekly:	Cost Variance Report
As Generated:	Field Sampling Test Results Confirmation Sample Test Results

Appendix A
Photographic Documentation



Project No. 17417

Contract No. N62470-93-D-3032

Delivery Order: 77

Location : Site 43

Description: Bobcat used for transporting debris to predesignated area



Project No. 17417

Contract No. N62470-93-D-3032

Delivery Order: 77

Location : Site 43

Description: Army tank area clearing in preparation for dismantling



Project No. 17417
Contract No. N62470-93-D-3032
Delivery Order: 77
Location : Site 43
Description: Army tank dismantling



Project No. 17417
Contract No. N62470-93-D-3032
Delivery Order: 77
Location : Site 43
Description: Unidentified cans (paint) in the background



Project No. 17417
Contract No. N62470-93-D-3032
Delivery Order: 77
Location : Site 43
Description: Unidentified cans (paint) being placed in drums for disposal



Project No. 17417
Contract No. N62470-93-D-3032
Delivery Order: 77
Location : Site 43
Description: Debris removal in progress



Project No. 17417
Contract No. N62470-93-D-3032
Delivery Order: 77
Location : Site 43
Description: Site after Army tank removal



Project No. 17417
Contract No. N62470-93-D-3032
Delivery Order: 77
Location : Site 43
Description: Trailer for scrap metal debris

Appendix B

Hazardous Waste Manifests



South Carolina Department of Health and Environmental Control

State of South Carolina
Department of Health and Environmental Control
P.O. Box 12000
Columbia, SC 29212-0000

PLEASE PRINT in TYPE (Form designed for use on electronic data transmission) Form Approved OMB No. 2050-0028 Expires 1-22-97

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's U.S. EPA ID No.	Manifest No.	Page 1 of 1	Information in this manifest must be prepared by Federal law and is by State law
1. Generator's Name and Mailing Address		2. U.S. EPA ID Number		3. State Manifest Document Number	
4. Generator's Phone		5. U.S. EPA ID Number		6. State Generator's ID	
7. Transporter 1 Company Name		8. U.S. EPA ID Number		9. State Transporter's ID	
10. Designated Facility Name and Site Address		11. U.S. EPA ID Number		12. State Transporter's ID	
13. U.S. DOT Description, including Proper Shipping Name, Hazard Class, and G-Number		14. Container No.		15. Total Quantity (Lbs. or Gallons)	
16. Additional Descriptors for Materials Listed Above		17. Container Type		18. Waste Manifest No.	
19. Special Handling Instructions and Additional Information		20. Manifest Contact for Wastes Listed Above		21. Facility's Phone	
22. Generator's Certification		23. Transporter 1 Acknowledgment of Receipt of Materials		24. Transporter 2 Acknowledgment of Receipt of Materials	
25. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest		26. Transporter 1 Signature		27. Transporter 2 Signature	
28. Facility Owner or Operator Signature		29. Date		30. Date	

20-422-0000

Generator's Name and Mailing Address: **AGS EMPLOYMENT GROUP INC**
 Lot 223 Wilson Blvd.
 PSC Box 2004
 910 1451-5043 Camp Lejeune, NC 28542-0004

Generator's U.S. EPA ID No: **NC617001258001207**

Manifest No: **1**

State Manifest Document Number: **0**

State Generator's ID: **0**

Transporter 1 Company Name: **ENSR OPERATIONS**

U.S. EPA ID Number: **0409211101091619**

State Transporter's ID: **216-12-9592**

Designated Facility Name and Site Address: **Thermostat Inc**
 2324 Verneale Road
 Rock Hill, SC 29730

U.S. EPA ID Number: **SC004444213131**

State Transporter's ID: **003-324-8310**

U.S. DOT Description: **DOT NON-Regulated**

Container No.: **0-0-4-D-M-A-1-4-0-0-P**

Total Quantity: **7.777**

Additional Descriptors: **SI-100014-0475**

Manifest Contact: **709**

Special Handling Instructions: **IN CASE OF EMERGENCY CALL: ENSR OPERATIONS**
1-800-759-3677 25516
SAN 209160

Generator's Certification: I hereby certify that the contents of this container are fully and accurately described on the proper shipping name and the hazard class, marking, and label, and that it is in proper condition for transport by highway, air, rail, water, or other mode of transportation and is in compliance with the requirements of the Department of Transportation and the State of South Carolina.

Transporter 1 Acknowledgment: **Brent Rowse** (Signature) **10/02/95** (Date)

Transporter 2 Acknowledgment: **Brent Rowse** (Signature) **10/03/95** (Date)

Facility Owner or Operator Certification: **John Gaither** (Signature) **10/04/95** (Date)

Appendix C
Disposal Certification

ThermalKEM

Certificate of Destruction

This certifies that ThermalKEM, Inc., Rock Hill, South Carolina, SCD044442333 has incinerated the waste material described below for Manifest #01207, on or about 10/13/95.

Service Company: OHM Remediation Services

Generator: AC/S E.M.D./Marine Corps Base
Lot 203 Holcomb Blvd.
PSC Box 2004
Camp LeJeune, N.C. 28542-0004

Approval Code(s): ST-00014-0475

*Amita Geddings
Senior Account
Specialist*

Appendix D

Metals Recycling Documentation



SOUTHERN METALS RECYCLING, INC.
P.O. BOX 1769, YARD 2
WILMINGTON, NC 28403

5415

88-2/531
18

7/17/95

PAY TO THE ORDER OF O. H. M. Remediation \$ 183.25
DOLLARS

NationsBank

NationsBank, N.A. (Caroline)
Wilmington, NC 28401

FOR TK 49129 Henry W Greene
#005415# :0531000251: 181124744#

SOUTHERN METALS RECYCLING, INC.

HWY 421 NORTH P.O. BOX 1769 PHONE: (910) 782-2848
WILMINGTON, N.C. 28402

No. 133048

7/13/95

LOAD OF same Time In _____ Time Out _____

INBOUND From
 OUTBOUND To O. H. M. Remediation

Driver: On Off P.O. Box 8116 Truck Lic. No. 451-1809
Camp Lejeune N.C.

Details: 28547-8116
ATTN: Randy Smith

PRECISION PRESS (910) 791-9787

LBS. GROSS
LBS. TARE
LBS. NET
51740 lb
37080 lb
14660

Weighter _____

Appendix E
Chain-of-Custody



OHM Corporation

CHAIN-OF-CUSTODY RECORD

COPY

Form 0019
Field Technical Services
Rev. 08/83

144149

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME Camp Lejeune D.O. 77					PROJECT LOCATION Jacksonville, N.C.					NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS) 8240, 8270, 8080 FULL TCLP TAL METALS R.C.U. Reactives Ignitability, Corrosivity Flashpoint, Paint Filter PH, Total Halides	REMARKS									
PROJ. NO. 17417		PROJECT CONTACT Randy Smith			PROJECT TELEPHONE NO. 910-451-2390																
CLIENT'S REPRESENTATIVE Van Marshbern					PROJECT MANAGER/SUPERVISOR Jim Dunn / Randy Smith																
ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)															
1	EL577-CD001	7/19	0837	X		Dried paint from various drums				3	X	X	X	X	X	X	X	X	X	X	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-1	Corcoran R. Adam	FED-EX	7/19	1700	- Sample sent to A.S.C. in Findlay, OH
2	1-1	3224508033	Corita Jensen	7/19	1056	- 14 day T.A.T.
3						- please fax results to (910) 451-1809 AS
4						soon as possible TEMP - 9°C - CKB SAMPLER'S SIGNATURE Corcoran R. Adam

Appendix F
QC Documentation

SUMMARY OF ANALYTICAL METHODOLOGY

Parameter	Reference	Method
Conventionals		
Solids, Total (solid)	MCAWW	160.3
Paint Filter Test (Free Liquid)	SW-846	9095
Total Halogens as CL	SW-846	5050/9252A
Oxidizer	ASTM	D4981
<u>RCRA Characteristics</u>		
Reactive Sulfide	SW-846	7.3.4.2
Flash Point, Seta Flash	SW-846	1020
Reactive Cyanide	SW-846	7.3.3.2
pH, Electrode (soil)	CLP	1.7.1.1
Metals		
Total Metals	SW-846	6010
Mercury by Cold Vapor(solid)	SW-846	7471
Organics		
Herbicides by GC	SW-846	8150 (1)
Semi-volatile Compounds by GC/MS	CLP SOW	OLM03.1
Pesticides and PCBs by GC	SW-846	8080
Volatile Compounds by GC/MS	CLP SOW	OLM03.1
Total Petroleum Hydrocarbons (TPHC) by GC		
Diesel Range Organics (DRO) by GC	SW-846	8100
RCRA TCLP		
Leachate Preparation	SW-846	1311
Herbicides by GC	SW-846	8150 (1)
Pesticides and PCBs by GC	SW-846	8080
Metals	SW-846	6010
Mercury by Cold Vapor	SW-846	7470
Arsenic by GFAA	SW-846	7060
Selenium by GFAA	SW-846	7740
Thallium by GFAA	SW-846	7841
Semi-volatile Compounds by GC/MS	CLP SOW	OLM03.1
Volatile Compounds by GC/MS	CLP SOW	OLM03.1

METHODOLOGY REFERENCES

- ASTM *American Society for Testing and Materials*, 1985 edition.
- MCAWW *Methods for Chemical Analysis of Water and Wastes*, April 1979 and Updated #1 March 1983.
- CLP *USEPA Contract Laboratory Program*, Document #OLMO3.0, update August 1994 #OLMO3.1 and Document #ILMO4.0.
- EPA-500 *USEPA Methods for the Determination of Organic Compounds in Drinking Water*, EPA-600/4-88/039 December 1988.
- EPA-600 *USEPA Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*, EPA-600/4-82-057 July 1982.
- NIOSH *National Institute for Occupational Safety and Health*, 3rd edition, 1984.
- SMEWW *Standard Methods for the Examination of Water and Wastewater*, 17th edition, 1989.
- STOA *Spot Tests In Organic Analysis*, 7th edition, 1966.
- SW-846 *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, 3rd edition, September 1986 and Update #1 July 1992.
- (1) This method was modified to incorporate the use of Boron Trifluoride (BF₃) as the derivatizing reagent according to Method 6640 in *SMEWW*, 17th edition, 1989.
- Title 22 *Waste Extraction Test*, Title 22, Section 66261.126 Appendix 2 of the California Administrative Code, May 1991.

Laboratory Certifications

State	Agency	Certification #
Alabama	ADEM	40830
California	CADOH	1178
Colorado	CODOH	OH113
Connecticut	CDPH & AS	PH-0154
Delaware	DEHSS	OH113
Kansas	KSDHE	E-202 & E-1173
Louisiana	LADOHH	92-10
Maryland	MDDHMH	210
Massachusetts	MADEP	M-OH113
New Jersey	NJDEPE	74603
New York	NYDOH	10712
North Carolina	NCDEM	392
Ohio	OHEPA	OH113
Oklahoma	OKDEQ	9216
Pennsylvania	PADER	68-450
Rhode Island	RIDOH	214/142
South Carolina	SCDEHNR	92002
Tennessee	TNDOH/TNDEC	2978
Virginia	VADGS	00011
Washington	WADOE	C154
Wisconsin	WIDNR	999037160

Validated by:

- o US Army Corps of Engineers Chemical Analysis in Various Matrices

Approvals:

- o EnviroSAFE Waste Characterization Analysis
- o USDA Permit for Importing Soils
- o Florida DEP Quality Assurance Plan #930034G
- o Naval Facilities Engineering Service Center Chemical Analysis in Various Matrices

REPORT KEY

mg/kg	= milligram per kilogram (ppm)
Mg/m ³	= milligram per cubic meter
ug/kg	= microgram per kilogram (ppb)
mg/L	= milligram per liter (ppm)
ug/L	= microgram per liter (ppb)
mg/W	= milligram per wipe
ug/W	= microgram per wipe
mg/SMP	= milligram per sample
ug/SMP	= microgram per sample (Tedlar Bag)
ug/smp	= microgram per sample
um/cm	= microMho per centimeter
pCi/l	= picocurie per liter
gm/cc	= grams per cubic centimeter
ppm	= parts per million
ppb	= parts per billion
ND	= Not detected at or above stated detection limit
<	= less than
>	= greater than
%	= percent
BTU/lb	= British Thermal Units per pound
Deg. C	= Degrees Celsius
n/a	= not applicable
Unk	= unknown
std	= result is relative to standard pH units
CV	= Conventionals
IR	= Infrared Spectrophotometric
GC	= Gas Chromatograph Instrument
GC/MS	= Gas Chromatography/Mass Spectrometer Instrument
GRO	= Gasoline Range Organics
DRO	= Diesel Range Organics
PCB	= Polychlorinated Biphenyls (PCBs)
EP TOX	= Extraction Procedure Toxicity
TCLP	= Toxicity Characteristic Leaching Procedure
RCRA	= Resource Conservation and Recovery Act
SOW	= Statement of Work

QUALITY ASSURANCE DATA

CONVENTIONAL DATA (CV10)

Compounds	Blank Results	Blank Spike Recov	Unspiked Sample Results	Matrix Spike Recov	Relative Percent Diff	Batch Number
Cyanide, Total	ND	80	ND	87	30	N2I4545
Reactive Cyanide	ND	66	-	-	-	N2I4539
Reactive Sulfide	ND	82	-	-	-	N2I4538
Halogens, Total as CL	ND	91	.280	95	-1	N2I4549

QUALITY ASSURANCE DATA

TARGET ANALYTE LIST TOTAL METALS ANALYSIS, (ME20)

Compounds	Blank Results mg/kg	Blank Spike Recov	Unspiked Sample Results mg/kg	Matrix Spike Recov	Relative Percent Diff	Batch Number
Aluminum	ND	95	1560	82	9	N2M6786
Antimony	ND	95	ND	-	20	N2M6786
Arsenic	ND	95	8.73	-	1	N2R6785
Barium	ND	98	39.8	99	8	N2M6786
Beryllium	ND	98	ND	85	1	N2M6786
Cadmium	ND	94	1.95	89	7	N2M6786
Calcium	ND	98	966	115	8	N2M6786
Chromium	ND	103	162	-	7	N2M6786
Cobalt	ND	99	84.4	-	10	N2M6786
Copper	ND	102	48.6	-	3	N2M6786
Iron	ND	100	51400	-	1	N2M6786
Lead	ND	97	2430	-	6	N2M6786
Magnesium	ND	92	4630	-	11	N2M6786
Manganese	ND	98	127	-	9	N2M6786
Mercury	ND	97	ND	117	1	N2G6780
Nickel	ND	98	42.5	94	2	N2M6786
Potassium	ND	99	172	98	5	N2M6786
Selenium	ND	118	ND	73	33	N2R6785
Silver	ND	95	ND	-	28	N2M6786
Sodium	ND	95	ND	95	3	N2M6786
Thallium	ND	108	ND	-	-	N2R6785
Vanadium	ND	99	9.73	87	3	N2M6786
Zinc	ND	99	62200	-	28	N2M6786

Because the analyte was present in the unspiked sample at a high level, the spiked sample does not provide valid spike recovery data. Variable QC matrix spike recoveries were attributed to sample matrix interference.

QUALITY ASSURANCE DATA

TOTAL PESTICIDE AND PCB ANALYSIS, GC, (GS05)

Compounds	Blank Results mg/kg	Blank Spike Recov	Unspiked Sample Results mg/kg	Matrix Spike Recov	Relative Percent Diff	Batch Number
Aldrin	ND	81	-	-	-	N2P50955A
Alpha-BHC	ND	76	-	-	-	N2P50955A
Beta-BHC	ND	87	-	-	-	N2P50955A
Chlordane	ND	93	-	-	-	N2P50955A
4,4'-DDD	ND	100	-	-	-	N2P50955A
4,4'-DDE	ND	94	-	-	-	N2P50955A
4,4'-DDT	ND	100	-	-	-	N2P50955A
Delta-BHC	ND	75	-	-	-	N2P50955A
Dieldrin	ND	94	-	-	-	N2P50955A
Endosulfan sulfate	ND	82	-	-	-	N2P50955A
Endosulfan I	ND	82	-	-	-	N2P50955A
Endosulfan II	ND	82	-	-	-	N2P50955A
Endrin	ND	100	-	-	-	N2P50955A
Endrin aldehyde	ND	75	-	-	-	N2P50955A
Endrin ketone	ND	94	-	-	-	N2P50955A
Gamma-BHC	ND	78	-	-	-	N2P50955A
Heptachlor	ND	79	-	-	-	N2P50955A
Heptachlor epoxide	ND	87	-	-	-	N2P50955A
Methoxychlor	ND	113	-	-	-	N2P50955A

Matrix spike recoveries are not available due to the dilution of the QC matrix spike sample extracts during analysis.

QUALITY ASSURANCE DATA

TARGET COMPOUND LIST BASE/NEUTRAL/ACID ANALYSIS, MS, (MS22)

Compounds	Blank Results mg/kg	Blank Spike Recov	Unspiked Sample Results mg/kg	Matrix Spike Recov	Relative Percent Diff	Batch Number
Acenaphthene	ND	82	ND	-	0	N2C50969
p-Chloro-m-cresol	ND	80	ND	-	0	N2C50969
2-Chlorophenol	ND	80	ND	-	0	N2C50969
1,4-Dichlorobenzene	ND	71	ND	-	0	N2C50969
2,4-Dinitrotoluene	ND	76	ND	-	0	N2C50969
Isophorone	ND	71	ND	-	0	N2C50969
N-Nitrosodi-n-propylamine	ND	71	ND	-	0	N2C50969
4-Nitrophenol	ND	76	ND	-	0	N2C50969
Pentachlorophenol	ND	56	ND	-	0	N2C50969
Phenol	ND	76	ND	-	0	N2C50969
Pyrene	ND	76	ND	-	0	N2C50969
1,2,4-Trichlorobenzene	ND	71	ND	-	0	N2C50969

3-Methyl- and 4-Methylphenol coelute and are reported as the total
 Matrix spike recoveries are not available due to the dilution of the QC
 matrix spike sample extracts during analysis.

QUALITY ASSURANCE DATA

TARGET COMPOUND LIST VOLATILE ANALYSIS, MS, (MV20)

Compounds	Blank Results mg/kg	Blank Spike Recov	Unspiked Sample Results mg/kg	Matrix Spike Recov	Relative Percent Diff	Batch Number
Benzene	ND	96	ND	106	1	N2V4573
Chlorobenzene	ND	100	ND	100	4	N2V4573
1,1-Dichloroethylene	ND	104	ND	106	2	N2V4573
Toluene	ND	100	ND	104	1	N2V4573
Trichloroethylene	ND	104	ND	103	2	N2V4573

QUALITY ASSURANCE DATA

RCRA TCLP LEACHATE HERBICIDE ANALYSIS, GC, (GS52)

Compounds	Blank Results mg/L	Blank Spike Recov	Unspiked Sample Results mg/L	Matrix Spike Recov	Relative Percent Diff	Batch Number
2,4-D	ND	78	ND	85	3	N7H50959
2,4,5-TP (Silvex)	ND	73	ND	75	2	N7H50959

Surrogate recoveries which are outside of control limits were attributed to the sample matrix, this was confirmed by replicate analysis.

QUALITY ASSURANCE DATA

RCRA TCLP LEACHATE PCB ANALYSIS, GC, (GS53)

Compounds	Blank Results mg/L	Blank Spike Recov	Unspiked Sample Results mg/L	Matrix Spike Recov	Relative Percent Diff	Batch Number
Aroclor 1260	ND	95	ND	106	2	N7P50961

QUALITY ASSURANCE DATA

RCRA TCLP LEACHATE PESTICIDE ANALYSIS, GC, (GS54)

Compounds	Blank Results mg/L	Blank Spike Recov	Unspiked Sample Results mg/L	Matrix Spike Recov	Relative Percent Diff	Batch Number
Chlordane	ND	86	ND	89	3	N7P50960
Endrin	ND	84	ND	92	0	N7P50960
Heptachlor	ND	80	ND	76	4	N7P50960
Heptachlor epoxide	ND	87	ND	91	0	N7P50960
Lindane	ND	85	ND	85	0	N7P50960
Methoxychlor	ND	86	ND	90	0	N7P50960

QUALITY ASSURANCE DATA

RCRA TCLP LEACHATE METALS ANALYSIS, (ME52)

Compounds	Blank Results mg/L	Blank Spike Recov	Unspiked Sample Results mg/L	Matrix Spike Recov	Relative Percent Diff	Batch Number
Arsenic	ND	88	ND	97	6	N7R6765
Barium	ND	95	.562	97	1	N7M6766
Cadmium	ND	90	ND	93	1	N7M6766
Chromium	ND	93	.054	95	1	N7M6766
Lead	ND	90	1.88	94	1	N7M6766
Mercury	ND	95	ND	98	1	N7G6779
Selenium	ND	96	ND	93	13	N7R6765
Silver	ND	95	ND	86	3	N7M6766

QUALITY ASSURANCE DATA

RCRA TCLP LEACHATE BASE/NEUTRAL/ACID ANALYSIS, MS, (MS52)

Compounds	Blank Results mg/L	Blank Spike Recov	Unspiked Sample Results mg/L	Matrix Spike Recov	Relative Percent Diff	Batch Number
2,4-Dinitrotoluene	ND	68	ND	79	14	N7C50958
Hexachlorobenzene	ND	85	ND	92	9	N7C50958
Hexachloroethane	ND	35	ND	52	12	N7C50958
Hexachlorobutadiene	ND	38	ND	52	8	N7C50958
2-Methylphenol	ND	76	ND	80	5	N7C50958
4-Methylphenol	ND	75	ND	79	7	N7C50958
Nitrobenzene	ND	82	ND	80	0	N7C50958
Pentachlorophenol	ND	54	ND	85	35	N7C50958
Pyridine	ND	63	ND	63	4	N7C50958
2,4,5-Trichlorophenol	ND	76	ND	88	9	N7C50958
2,4,6-Trichlorophenol	ND	90	ND	100	15	N7C50958

3-Methyl- and 4-Methylphenol coelute and are reported as the total

QUALITY ASSURANCE DATA

RCRA TCLP LEACHATE (ZHE) VOLATILE ANALYSIS, MS, (MV50)

Compounds	Blank Results mg/L	Blank Spike Recov	Unspiked Sample Results mg/L	Matrix Spike Recov	Relative Percent Diff	Batch Number
Benzene	ND	96	ND	96	4	N7V4571
Carbon tetrachloride	ND	96	ND	92	0	N7V4571
Chlorobenzene	ND	100	ND	100	0	N7V4571
Chloroform	ND	88	ND	96	0	N7V4571
1,4-Dichlorobenzene	ND	103	ND	96	0	N7V4571
1,2-Dichloroethane	ND	96	ND	96	0	N7V4571
1,1-Dichloroethylene	ND	92	ND	96	8	N7V4571
Methyl ethyl ketone	ND	88	ND	76	5	N7V4571
Tetrachloroethylene	ND	99	ND	100	0	N7V4571
Trichloroethylene	ND	104	ND	104	4	N7V4571
Vinyl chloride	ND	100	ND	104	14	N7V4571

QUALITY ASSURANCE DATA
SURROGATE SUMMARY REPORT

SURROGATE ID	A159	B732	A121	A884	A158	B142	# OUT
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QC BATCH: N2C50969 Solid (Semi-Volatile organics by MS)

SAMPLE ID							
BLANK	81	80	68	74	82	94	0
BLANK SPIKE	80	79	76	76	80	86	0
CLJ77CD001	0 D	0 D	0 D	0 D	0 D	0 D	0
CLJ77CD001 MD	0 D	0 D	0 D	0 D	0 D	0 D	0
CLJ77CD001 MS	0 D	0 D	0 D	0 D	0 D	0 D	0

QC LIMITS (25-121) (24-113) (19-122) (23-120) (30-115) (18-137)

QC BATCH: N7C50958 Leachate (Semi-Volatile organics by MS)

SAMPLE ID							
BLANK	85	71	80	85	85	47	0
BLANK SPIKE	81	69	80	80	80	37	0
CLJ77CD001	80	67	96	87	85	83	0
CLJ77CD001 MD	73	67	81	77	77	83	0
CLJ77CD001 MS	78	72	95	79	81	93	0

QC LIMITS (21-110) (10-110) (10-123) (35-114) (43-116) (33-141)

SURROGATE ID	F047	# OUT
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QC BATCH: N7H50959 Leachate (Herbicide compounds by GC)

SAMPLE ID		
BLANK	90	0
BLANK SPIKE	98	0
CLJ77CD001	156 *	1
CLJ77CD001 MD	157 *	1
CLJ77CD001 MS	157 *	1

QC LIMITS (10-150)

SURROGATE ID	B816	A500	# OUT
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QC BATCH: N2P50955A Solid (Pesticide compounds by GC)

SAMPLE ID			
BLANK	81	114	0
BLANK SPIKE	75	111	0
CLJ77CD001	56 *	96	1

QC LIMITS (60-150) (60-150)

SURROGATE ID

- | | |
|-------------------------------------|--------------------------------------|
| A047 = 1,2-Dichloroethane-D4 | A500 = Decachlorobiphenyl |
| B185 = Toluene-D8 | F048 = Decachlorobiphenyl (PCB) |
| B668 = Bromofluorobenzene | F047 = 2,4-Dichlorophenylacetic-acid |
| A159 = 2-Fluorophenol | F096 = 2,4,5,6-TCMX (PCB) |
| B732 = Phenol-D6 | |
| A121 = 2,4,6-Tribromophenol | |
| A884 = Nitrobenzene-D5 | |
| A158 = 2-Fluorobiphenyl | |
| B142 = Terphenyl-D14 | |
| B816 = 2,4,5,6-Tetrachloro-m-xylene | |

* Values outside of method quality control limits
D Sample was diluted, however, some surrogates may be reported if results were observed.

It is ASC's laboratory policy to allow one surrogate per sample fraction (acid, base-neutral or pesticide) to exceed the stated QC limits. This policy is based upon the USEPA SOW for the Contract Laboratory Program (CLP).

QUALITY ASSURANCE DATA
SURROGATE SUMMARY REPORT

SURROGATE ID	B816	A500	# OUT
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QC BATCH: N7P50960 Leachate (Pesticide compounds by GC)

SAMPLE ID			
BLANK	82	85	0
BLANK SPIKE	82	56 *	1
CLJ77CD001	71	104	0
CLJ77CD001 MD	76	107	0
CLJ77CD001 MS	76	107	0
QC LIMITS	(60-150)	(60-150)	

SURROGATE ID	F048	F096	# OUT
--------------	------	------	-------

QC BATCH: N7P50961 Leachate (Pesticide compounds by GC)

SAMPLE ID			
BLANK	98	76	0
BLANK SPIKE	97	71	0
CLJ77CD001	70	52 *	1
CLJ77CD001 MD	81	58 *	1
CLJ77CD001 MS	84	57 *	1
QC LIMITS	(60-150)	(60-150)	

SURROGATE ID	A047	B185	B668	# OUT
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QC BATCH: N2V4573 Solid (Volatile organics by MS)

SAMPLE ID				
BLANK	100	102	106	0
BLANK SPIKE	98	98	102	0
CLJ77CD001	111	114	98	0
CLJ77CD001 MD	89	105	90	0
CLJ77CD001 MS	99	102	90	0
QC LIMITS	(70-121)	(84-138)	(59-113)	

QC BATCH: N7V4571 Leachate (Volatile organics by MS)

SAMPLE ID				
BLANK	97	100	105	0
BLANK SPIKE	93	96	110	0
CLJ77CD001	102	102	108	0
CLJ77CD001 MD	95	100	105	0
CLJ77CD001 MS	92	98	103	0
QC LIMITS	(76-114)	(88-110)	(86-115)	

SURROGATE ID	
A047 = 1,2-Dichloroethane-D4	A500 = Decachlorobiphenyl
B185 = Toluene-D8	F048 = Decachlorobiphenyl (PCB)
B668 = Bromofluorobenzene	F047 = 2,4-Dichlorophenylacetic-acid
A159 = 2-Fluorophenol	F096 = 2,4,5,6-TCMX (PCB)
B732 = Phenol-D6	
A121 = 2,4,6-Tribromophenol	
A884 = Nitrobenzene-D5	
A158 = 2-Fluorobiphenyl	
142 = Terphenyl-D14	
B816 = 2,4,5,6-Tetrachloro-m-xylene	

* Values outside of method quality control limits
D Sample was diluted, however, some surrogates may be reported if results were observed.

It is ASC's laboratory policy to allow one surrogate per sample fraction (acid, base-neutral or pesticide) to exceed the stated QC limits. This policy is based upon the USEPA SOW for the Contract Laboratory Program (CLP).

Appendix G
Analytical Data

DATA SUMMARY REPORT

DATE: 07/31/95

PAGE: 1

Company: OHM REMEDIATION SERVICES CORP.

Sample Point ID: CLJ77CD001
ASC Sample Number: JO5477
Sample Date: 950719
Facility Code: 017417N

Parameters	Units
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Volatile Tentatively Identified Compounds , GC/MS, (CL1E)

1,2,4-Trimethylbenzene	mg/kg	691 J
Benzene, 1,2,3-trimethyl-	mg/kg	284 J
Benzene, 1,4-diethyl-	mg/kg	157 J
Benzene, 1-ethyl-2-methyl-	mg/kg	404 J
Benzene, 1-methyl-3-propyl-	mg/kg	182 J
Cyclohexane, butyl-	mg/kg	229 J
Decane	mg/kg	1310 J
Undecane	mg/kg	169 J
Unk ether or epoxide	mg/kg	328 J
Unk substituted aromatic	mg/kg	158 J

Semivolatile Tentatively Identified Compounds, GC/MS, (CL1F)

Benzene, 1,2,3-trimethyl-	mg/kg	466 J
Benzene, 1,3-dimethyl-	mg/kg	205 J
Benzene, 1-ethyl-2-methyl-	mg/kg	184 J
Benzene, 1-methyl-3-propyl-	mg/kg	279 J
Benzene, 4-ethyl-1,2-dimethyl-	mg/kg	164 J
Decane	mg/kg	1060 J
Decane, 4-methyl-	mg/kg	296 J
Hexadecanoic acid	mg/kg	333 J
Nonane	mg/kg	298 J
Nonane, 2,5-dimethyl-	mg/kg	198 J
Nonane, 3-methyl-	mg/kg	165 J
Nonane, 3-methyl-	mg/kg	163 J
Oleic Acid	mg/kg	151 J
Undecane	mg/kg	648 J
Unk hydrocarbon	mg/kg	425 J
Unk hydrocarbon	mg/kg	421 J
Unk hydrocarbon	mg/kg	167 J
Unk hydrocarbon	mg/kg	162 J
unknown	mg/kg	132 J
unknown	mg/kg	132 J

DATA SUMMARY REPORT

DATE: 07/31/95

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Company: OHM REMEDIATION SERVICES CORP.

Sample Point ID: CLJ77CD001
ASC Sample Number: JO5477
Sample Date: 950719
Facility Code: 017417N

Parameters	Units
------------	-------

Total Pesticide and PCB Analysis, GC, (GS05)

Aroclor 1254	mg/kg	<1.13
Aroclor 1260	mg/kg	<1.13

RCRA TCLP Leachate Herbicide Analysis, GC, (GS52)

2,4-D	mg/L	<.250
2,4,5-TP (Silvex)	mg/L	<.250

RCRA TCLP Leachate PCB Analysis, GC, (GS53)

Aroclor 1016	mg/L	<.001
Aroclor 1221	mg/L	<.001
Aroclor 1232	mg/L	<.001
Aroclor 1242	mg/L	<.001
Aroclor 1248	mg/L	<.001

Aroclor 1254	mg/L	<.001
Aroclor 1260	mg/L	<.001

RCRA TCLP Leachate Pesticide Analysis, GC, (GS54)

Chlordane	mg/L	<.020
Endrin	mg/L	<.002
Heptachlor	mg/L	<.002
Heptachlor epoxide	mg/L	<.002
Lindane	mg/L	<.002

Methoxychlor	mg/L	<.002
Toxaphene	mg/L	<.040

Target Analyte List Total Metals Analysis, (ME20)

Aluminum	mg/kg	1560
Antimony	mg/kg	<1.66
Arsenic	mg/kg	8.73
Barium	mg/kg	39.8
Beryllium	mg/kg	<.024
Cadmium	mg/kg	1.95
Calcium	mg/kg	966
Chromium	mg/kg	162
Cobalt	mg/kg	84.4

DATA SUMMARY REPORT

DATE: 07/31/95

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Company: OHM REMEDIATION SERVICES CORP.

Sample Point ID: CLJ77CD001
ASC Sample Number: JO5477
Sample Date: 950719
Facility Code: 017417N

Parameters Units

Target Compound List Volatile Analysis, MS, (MV20)

Acetone	mg/kg	<64.5
Benzene	mg/kg	<32.3
Bromoform	mg/kg	<32.3
Carbon disulfide	mg/kg	<32.3
Carbon tetrachloride	mg/kg	<32.3
Chlorobenzene	mg/kg	<32.3
Chlorodibromomethane	mg/kg	<32.3
Chloroethane	mg/kg	<32.3
Chloroform	mg/kg	<32.3
Dichlorobromomethane	mg/kg	<32.3
1,1-Dichloroethane	mg/kg	<32.3
1,2-Dichloroethane	mg/kg	<32.3
1,1-Dichloroethylene	mg/kg	<32.3
1,2-Dichloropropane	mg/kg	<32.3
cis-1,3-Dichloropropylene	mg/kg	<32.3
trans-1,3-Dichloropropylene	mg/kg	<32.3
Ethylbenzene	mg/kg	128
2-Hexanone	mg/kg	<32.3
Methyl bromide	mg/kg	<32.3
Methyl chloride	mg/kg	<32.3
Methylene chloride	mg/kg	<32.3
Methyl ethyl ketone	mg/kg	<32.3
Methyl-iso-butyl ketone	mg/kg	<64.5
Styrene	mg/kg	<32.3
1,1,2,2-Tetrachloroethane	mg/kg	<32.3
Tetrachloroethylene	mg/kg	<32.3
Toluene	mg/kg	<32.3
1,2-Trans-dichloroethylene	mg/kg	<32.3
1,1,1-Trichloroethane	mg/kg	<32.3
1,1,2-Trichloroethane	mg/kg	<32.3
Trichloroethylene	mg/kg	<32.3
Vinyl chloride	mg/kg	<32.3
Xylenes	mg/kg	664

DATA SUMMARY REPORT

DATE: 07/31/95

Company: OHM REMEDIATION SERVICES CORP.

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Sample Point ID: CLJ77CD001
ASC Sample Number: JO5477
Sample Date: 950719
Facility Code: 017417N

Parameters Units

RCRA TCLP Leachate (ZHE) Volatile Analysis, MS, (MV50)

Benzene	mg/L	<.125
Carbon tetrachloride	mg/L	<.125
Chlorobenzene	mg/L	<.125
Chloroform	mg/L	<.125
1,4-Dichlorobenzene	mg/L	<.125
1,2-Dichloroethane	mg/L	<.125
1,1-Dichloroethylene	mg/L	<.125
Methyl ethyl ketone	mg/L	<.125
Tetrachloroethylene	mg/L	<.125
Trichloroethylene	mg/L	<.125
Vinyl chloride	mg/L	<.125

CONVENTIONAL DATA (CV10)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results	Detection Limits	Blank Results	Batch Number
Cyanide, Total	mg/kg	ND	ND	N2I4545
Free Liquid	%	PASS	-	
Reactive Cyanide	mg/kg	ND	ND	N2I4539
Reactive Sulfide	mg/kg	196	ND	N2I4538
Solids, Total	%	73.6	-	
pH (Electrode)	std	4.81	-	
Flash Point, Seta Flash	Deg C	>93	-	
Halogens, Total as CL	%	.280	ND	N2I4549
Oxidizer (Spot Test)	N/A	Negative	-	

TARGET ANALYTE LIST TOTAL METALS ANALYSIS, (ME20)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aluminum	1560	2.71	ND	N2M6786
Antimony	ND	1.66	ND	N2M6786
Arsenic	8.73	.267	ND	N2R6785
Barium	39.8	.088	ND	N2M6786
Beryllium	ND	.024	ND	N2M6786
Cadmium	1.95	.048	ND	N2M6786
Calcium	966	1.10	ND	N2M6786
Chromium	162	.116	ND	N2M6786
Cobalt	84.4	.119	ND	N2M6786
Copper	48.6	.245	ND	N2M6786
Iron	51400	196	ND	N2M6786
Lead	2430	.548	ND	N2M6786
Magnesium	4630	3.64	ND	N2M6786
Manganese	127	.065	ND	N2M6786
Mercury	ND	.049	ND	N2G6780
Nickel	42.5	.364	ND	N2M6786
Potassium	172	20.1	ND	N2M6786
Selenium	ND	.160	ND	N2R6785
Silver	ND	.187	ND	N2M6786
Sodium	ND	16.0	ND	N2M6786
Thallium	ND	.206	ND	N2R6785
Vanadium	9.73	.109	ND	N2M6786
Zinc	62200	17.7	ND	N2M6786

TOTAL PESTICIDE AND PCB ANALYSIS, GC, (GS05)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	J05477

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aldrin	ND	.113	ND	N2P50955A
Alpha-BHC	ND	.113	ND	N2P50955A
Beta-BHC	ND	.113	ND	N2P50955A
Chlordane	ND	1.13	ND	N2P50955A
4,4'-DDD	14.8	.113	ND	N2P50955A
4,4'-DDE	.996	.113	ND	N2P50955A
4,4'-DDT	.240	.113	ND	N2P50955A
Delta-BHC	ND	.113	ND	N2P50955A
Dieldrin	ND	.113	ND	N2P50955A
Endosulfan sulfate	ND	.113	ND	N2P50955A
Endosulfan I	ND	.113	ND	N2P50955A
Endosulfan II	ND	.113	ND	N2P50955A
Endrin	ND	.113	ND	N2P50955A
Endrin aldehyde	ND	.113	ND	N2P50955A
Endrin ketone	ND	.113	ND	N2P50955A
Gamma-BHC	ND	.113	ND	N2P50955A
Heptachlor	ND	.113	ND	N2P50955A
Heptachlor epoxide	ND	.113	ND	N2P50955A
Methoxychlor	ND	.113	ND	N2P50955A
Toxaphene	ND	2.26	ND	N2P50955A
Aroclor 1016	ND	1.13	ND	N2P50955A
Aroclor 1221	ND	1.13	ND	N2P50955A
Aroclor 1232	ND	1.13	ND	N2P50955A
Aroclor 1242	ND	1.13	ND	N2P50955A
Aroclor 1248	ND	1.13	ND	N2P50955A
Aroclor 1254	ND	1.13	ND	N2P50955A
Aroclor 1260	ND	1.13	ND	N2P50955A

TARGET COMPOUND LIST BASE/NEUTRAL/ACID ANALYSIS, MS, (MS22)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
2-Nitroaniline	ND	16.5	ND	N2C50969
3-Nitroaniline	ND	16.5	ND	N2C50969
4-Nitroaniline	ND	16.5	ND	N2C50969
Nitrobenzene	ND	16.5	ND	N2C50969
2-Nitrophenol	ND	16.5	ND	N2C50969
4-Nitrophenol	ND	82.5	ND	N2C50969
Pentachlorophenol	ND	16.5	ND	N2C50969
Phenanthrene	ND	16.5	ND	N2C50969
Phenol	ND	16.5	ND	N2C50969
Pyrene	ND	16.5	ND	N2C50969
1,2,4-Trichlorobenzene	ND	16.5	ND	N2C50969
2,4,5-Trichlorophenol	ND	16.5	ND	N2C50969
2,4,6-Trichlorophenol	ND	16.5	ND	N2C50969
Benzidine	ND	16.5	ND	N2C50969
N-Nitrosodimethylamine	ND	16.5	ND	N2C50969
Pyridine	ND	16.5	ND	N2C50969

3-Methyl- and 4-Methylphenol coelute and are reported as the total Surrogate recoveries which are outside of control limits were attributed to dilution of extract during analysis. Sample and/or extract required dilution resulting in elevated detection limits (DLs).

SEMIVOLATILE TENTATIVELY IDENTIFIED COMPOUNDS, GC/MS, (CL1F)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
unknown	132	-	-	N2C50969
Unk hydrocarbon	425	-	-	N2C50969
Unk hydrocarbon	421	-	-	N2C50969
unknown	132	-	-	N2C50969
Unk hydrocarbon	167	-	-	N2C50969
Unk hydrocarbon	162	-	-	N2C50969
Oleic Acid	151	-	-	N2C50969
Nonane	298	-	-	N2C50969
Benzene, 1,3-dimethyl-	205	-	-	N2C50969
Benzene, 1-ethyl-2-methyl-	184	-	-	N2C50969
Decane	1060	-	-	N2C50969
Benzene, 4-ethyl-1,2-dimethyl-	164	-	-	N2C50969
Benzene, 1,2,3-trimethyl-	466	-	-	N2C50969
Undecane	648	-	-	N2C50969
Decane, 4-methyl-	296	-	-	N2C50969
Nonane, 2,5-dimethyl-	198	-	-	N2C50969
Hexadecanoic acid	333	-	-	N2C50969
Benzene, 1-methyl-3-propyl-	279	-	-	N2C50969
Nonane, 3-methyl-	165	-	-	N2C50969
Nonane, 3-methyl-	163	-	-	N2C50969

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

TARGET COMPOUND LIST VOLATILE ANALYSIS, MS, (MV20)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Acetone	ND	64.5	ND	N2V4573
Benzene	ND	32.3	ND	N2V4573
Bromoform	ND	32.3	ND	N2V4573
Carbon disulfide	ND	32.3	ND	N2V4573
Carbon tetrachloride	ND	32.3	ND	N2V4573
Chlorobenzene	ND	32.3	ND	N2V4573
Chlorodibromomethane	ND	32.3	ND	N2V4573
Chloroethane	ND	32.3	ND	N2V4573
Chloroform	ND	32.3	ND	N2V4573
Dichlorobromomethane	ND	32.3	ND	N2V4573
1,1-Dichloroethane	ND	32.3	ND	N2V4573
1,2-Dichloroethane	ND	32.3	ND	N2V4573
1,1-Dichloroethylene	ND	32.3	ND	N2V4573
1,2-Dichloropropane	ND	32.3	ND	N2V4573
cis-1,3-Dichloropropylene	ND	32.3	ND	N2V4573
trans-1,3-Dichloropropylene	ND	32.3	ND	N2V4573
Ethylbenzene	128	32.3	ND	N2V4573
2-Hexanone	ND	32.3	ND	N2V4573
Methyl bromide	ND	32.3	ND	N2V4573
Methyl chloride	ND	32.3	ND	N2V4573
Methylene chloride	ND	32.3	ND	N2V4573
Methyl ethyl ketone	ND	32.3	ND	N2V4573
Methyl-iso-butyl ketone	ND	64.5	ND	N2V4573
Styrene	ND	32.3	ND	N2V4573
1,1,2,2-Tetrachloroethane	ND	32.3	ND	N2V4573
Tetrachloroethylene	ND	32.3	ND	N2V4573
Toluene	ND	32.3	ND	N2V4573
1,2-Trans-dichloroethylene	ND	32.3	ND	N2V4573
1,1,1-Trichloroethane	ND	32.3	ND	N2V4573
1,1,2-Trichloroethane	ND	32.3	ND	N2V4573
Trichloroethylene	ND	32.3	ND	N2V4573
Vinyl chloride	ND	32.3	ND	N2V4573
Xylenes	664	32.3	ND	N2V4573

These reporting limits are higher than usual due to matrix interferences.

VOLATILE TENTATIVELY IDENTIFIED COMPOUNDS , GC/MS, (CL1E)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Unk ether or epoxide	328	-	-	N2V4573
Unk substituted aromatic	158	-	-	N2V4573
Benzene, 1-ethyl-2-methyl-	404	-	-	N2V4573
Decane	1310	-	-	N2V4573
Benzene, 1,4-diethyl-	157	-	-	N2V4573
Benzene, 1,2,3-trimethyl-	284	-	-	N2V4573
Undecane	169	-	-	N2V4573
1,2,4-Trimethylbenzene	691	-	-	N2V4573
Benzene, 1-methyl-3-propyl-	182	-	-	N2V4573
Cyclohexane, butyl-	229	-	-	N2V4573

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

RCRA TCLP LEACHATE HERBICIDE ANALYSIS, GC, (GS52)

Company Name

Facility

Sample Point

ASC Sample No.

OHM REMEDIATION SERVICES CORP.

017417N

CLJ77CD001

JOS477

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
2,4-D	ND	.250	ND	N7H50959
2,4,5-TP (Silvex)	ND	.250	ND	N7H50959

RCRA TCLP LEACHATE PCB ANALYSIS, GC, (GS53)

Company Name

Facility

Sample Point

ASC Sample No.

OHM REMEDIATION SERVICES CORP.

017417N

CLJ77CD001

JO5477

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Aroclor 1016	ND	.001	ND	N7P50961
Aroclor 1221	ND	.001	ND	N7P50961
Aroclor 1232	ND	.001	ND	N7P50961
Aroclor 1242	ND	.001	ND	N7P50961
Aroclor 1248	ND	.001	ND	N7P50961
Aroclor 1254	ND	.001	ND	N7P50961
Aroclor 1260	ND	.001	ND	N7P50961

RCRA TCLP LEACHATE PESTICIDE ANALYSIS, GC, (GS54)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Chlordane	ND	.020	ND	N7P50960
Endrin	ND	.002	ND	N7P50960
Heptachlor	ND	.002	ND	N7P50960
Heptachlor epoxide	ND	.002	ND	N7P50960
Lindane	ND	.002	ND	N7P50960
Methoxychlor	ND	.002	ND	N7P50960
Toxaphene	ND	.040	ND	N7P50960

RCRA TCLP LEACHATE METALS ANALYSIS, (ME52)

Company Name

Facility

Sample Point

ASC Sample No.

OHM REMEDIATION SERVICES CORP.

017417N

CLJ77CD001

JO5477

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Arsenic	ND	.002	ND	N7R6765
Barium	.562	.003	ND	N7M6766
Cadmium	ND	.001	ND	N7M6766
Chromium	.054	.003	ND	N7M6766
Lead	1.88	.016	ND	N7M6766
Mercury	ND	.001	ND	N7G6779
Selenium	ND	.001	ND	N7R6765
Silver	ND	.006	ND	N7M6766

RCRA TCLP LEACHATE BASE/NEUTRAL/ACID ANALYSIS, MS, (MS52)

Company Name	Facility	Sample Point	ASC Sample No.
OHM REMEDIATION SERVICES CORP.	017417N	CLJ77CD001	JO5477

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
2,4-Dinitrotoluene	ND	.100	ND	N7C50958
Hexachlorobenzene	ND	.100	ND	N7C50958
Hexachloroethane	ND	.100	ND	N7C50958
Hexachlorobutadiene	ND	.100	ND	N7C50958
2-Methylphenol	ND	.100	ND	N7C50958
4-Methylphenol	ND	.100	ND	N7C50958
Nitrobenzene	ND	.100	ND	N7C50958
Pentachlorophenol	ND	.100	ND	N7C50958
Pyridine	ND	.100	ND	N7C50958
2,4,5-Trichlorophenol	ND	.100	ND	N7C50958
2,4,6-Trichlorophenol	ND	.100	ND	N7C50958

3-Methyl- and 4-Methylphenol coelute and are reported as the total

RCRA TCLP LEACHATE (ZHE) VOLATILE ANALYSIS, MS, (MV50)

Company Name

Facility

Sample Point

ASC Sample No.

OHM REMEDIATION SERVICES CORP.

017417N

CLJ77CD001

JO5477

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Benzene	ND	.125	ND	N7V4571
Carbon tetrachloride	ND	.125	ND	N7V4571
Chlorobenzene	ND	.125	ND	N7V4571
Chloroform	ND	.125	ND	N7V4571
1,4-Dichlorobenzene	ND	.125	ND	N7V4571
1,2-Dichloroethane	ND	.125	ND	N7V4571
1,1-Dichloroethylene	ND	.125	ND	N7V4571
Methyl ethyl ketone	ND	.125	ND	N7V4571
Tetrachloroethylene	ND	.125	ND	N7V4571
Trichloroethylene	ND	.125	ND	N7V4571
Vinyl chloride	ND	.125	ND	N7V4571