

01.01 - 10/12/94 - 00443

12 Oct 94

The following is a Site Sensitivity Evaluation (SSE) for Installation Restoration (IR) Site #6, northern trench area, aboard Marine Corps Base, Camp Lejeune. Since this area is within an IR site, this SSE is applicable only with respect to petroleum based contaminated soils, and not hazardous waste. I certify this SSE to be accurate based on previous information, field observations, and my best professional judgement.

If you have any questions or comments, please contact me at telephone (910) 451-5068.

Sincerely,

  
Walter T. Haven, P.G.

# Site Sensitivity Evaluation (SSE)

## Site Characteristics Evaluation (Step 1)

### SITE #6 - NORTHERN TRENCH AREA

Characteristic	Condition	Rating	
Grain Size*	Medium Gravel	150	75
	Coarse Sand/Fine Gravel	125	
	Medium Sand	100	
	Fine Sand/Clayey Sand	75	
	Silt	50	
	Sandy Clay	25	
	Clay	0	
Are relict structures, sedimentary structures, and/or textures present in the zone of contamination and underlying "soils"?	Present and intersecting the water table.	10	10
	Present but <u>not</u> intersecting the water table.	5	
	None present.	0	
Distance from location of deepest contaminated soil** to water table.	0 - 5 feet	20	20
	(C, D & E sites only)	20	
	5 - 10 feet	10	
	>10 - 40 feet	0	
	> 40 feet	0	
Is the top of bedrock or transmissive indurated sediments located above the water table?	Yes	20	0
	No	0	
Artificial conduits present within the zone of contamination.	Present and intersecting the water table.	10	5
	Present but <u>not</u> intersecting the water table.	5	
	Not present.	0	

Total Site Characteristics Score: 110

\* Predominant grain size based on Unified Soil Classification System or U.S. Dept. of Agriculture Soil Classification Method.  
 \*\* (>10 ppm TPFH by Method 5030; >40 ppm TPFH by Method 3550; >250 ppm O&G by Method 9071)

# SITE #6 - NORTHERN TRENCH AREA

Table 2

## Site Sensitivity Evaluation (SSE)

Initial Cleanup Level  
(Step 2)

Final Cleanup Level  
(Step 3)

Low Boiling Point Hydrocarbons				
Total Site Characteristics Score	Initial Cleanup Level TPFH (ppm) EPA Method 5030	Select Site Category*	Category A & B (Multiply initial cleanup level by 1)	Final Cleanup Level
>150	≤10	↓ Select Site Category* →	1 x _____ = _____ ppm	
121-150	20		Category C & D (Multiply initial cleanup level by 2)	2 x _____ = _____ ppm
91-120	40		Category E (Multiply initial cleanup level by 3)	3 x _____ = _____ ppm
61-90	60			
31-60	80			
0-30	100			

JP-5

Medium Boiling Point Hydrocarbons				
Total Site Characteristics Score	Initial Cleanup Level TPFH (ppm) EPA Method 3550	Select Site Category*	Category A & B (Multiply initial cleanup level by 1)	Final Cleanup Level
>150	≤40	↓ Select Site Category* →	1 x _____ = _____ ppm	
121-150	80		Category C & D (Multiply initial cleanup level by 2)	2 x _____ = _____ ppm
<u>91-120</u>	<u>160</u>		Category <u>E</u> (Multiply initial cleanup level by 3)	3 x <u>160</u> = <u>480</u> ppm
61-90	240			
31-60	320			
0-30	400			

Oil & Grease (O&G)				
Total Site Characteristics Score	Initial Cleanup Level O&G (ppm) EPA Method 9071	Select Site Category*	Category A & B (Multiply initial cleanup level by 1)	Final Cleanup Level
>150	≤250	↓ Select Site Category* →	1 x _____ = _____ ppm	
121-150	400		Category C & D (Multiply initial cleanup level by 2)	2 x _____ = _____ ppm
91-120	550		Category E (Multiply initial cleanup level by 3)	3 x _____ = _____ ppm
61-90	700			
31-60	850			
0-30	1000			

\* See Site Category Descriptions

OCT-12-94 WED 07:34

OHM CORP

FAX NO. 9194672640

P. 01



OHM Corporation

OHM REMEDIATION SERVICES CORPORATION  
100 DOMINION DRIVE  
SUITE 107  
MORRISVILLE, NORTH CAROLINA 27560

PHONE #: (919)467-2349  
FAX #: (919)467-2640

TO: TOM MORRIS

DATE: 10/12/94

LOCATION: \_\_\_\_\_

TIME: \_\_\_\_\_

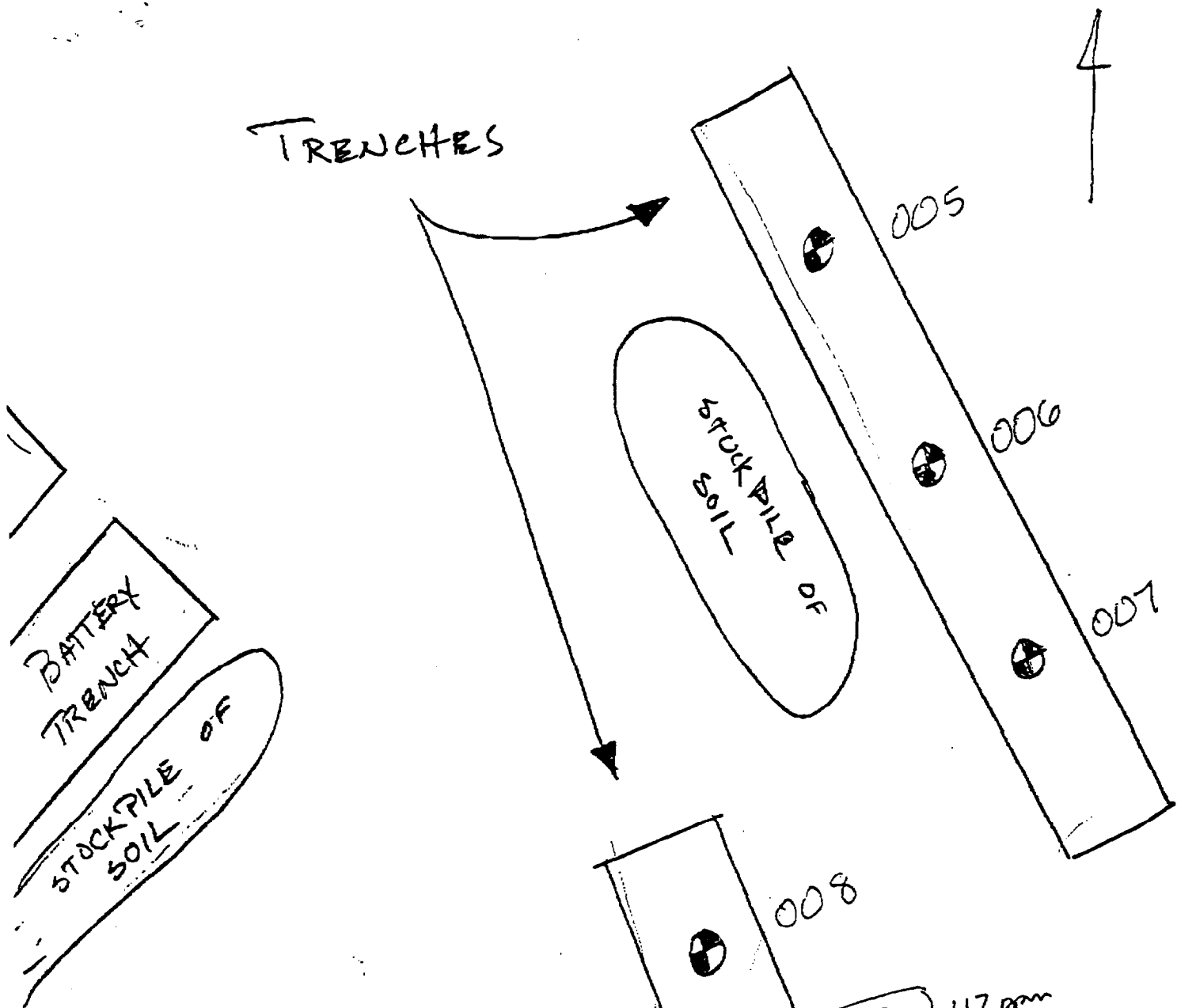
FAX NO.: \_\_\_\_\_

PAGES: 6

FROM: D. Kent Geis

COMMENTS: AS REQUESTED, PLEASE CALL IF YOU HAVE ANY QUESTIONS CONCERNING ATTACHED.

*Just*



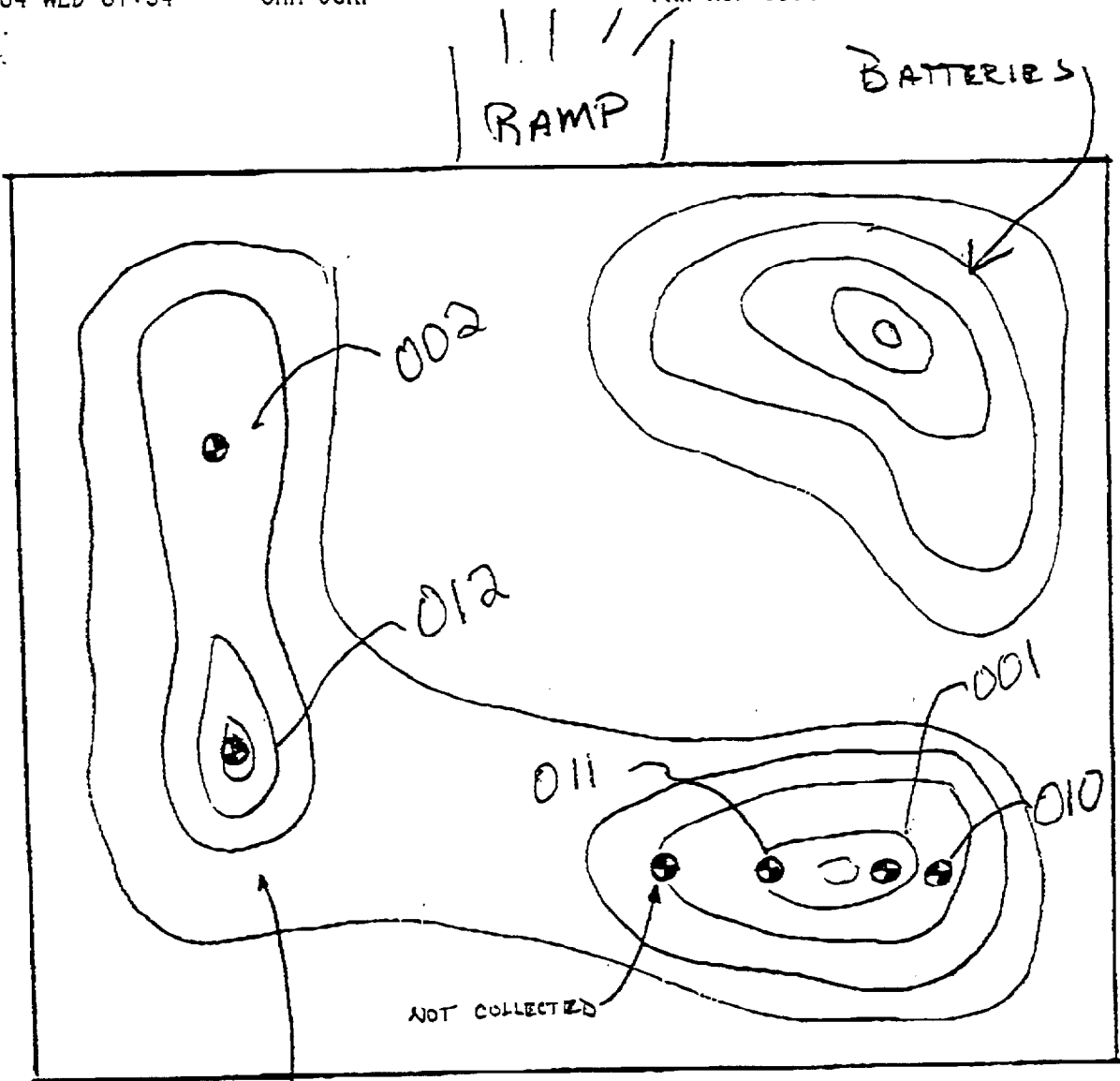
COLLECT 5 SAMPLES  
 COMPOSIT EACH SAMPLE  
 FROM TOP TO BOTTOM

USE THE FOLLOWING

SAMPLE NUMBERS:

- CLJ-WCS-001
- " " - 002
- etc...

FIELD NOTES



APPROX 200 yds

APPROX. 300 yds

SOIL STAGING CELL

Total  
500 yds

Estimated  
Disposal  
Costs

$$500 \times \$40/\text{yds} = \$20K$$

FIELD NOTES



## CAMP LEJEUNE

Project No: 16207

## Summary of Pesticides Results

Lab ID	Sample Number	Sample Description/ Location	Date Sampled	Time Sampled	Date Analyzed	Dilution Factor	Heptachlor (ug/kg)	4,4'-DDE (ug/kg)	Dieldrin (ug/kg)	4,4'-DDD (ug/kg)	4,4'-DDT (ug/kg)	Chlordane (ug/kg)
102	CLJ-WCS-001-C	Composite	8/24/94	9:20	8/25/94	1	0.00	108.29	0.00	402.95	1435.51	0.00
103	CLJ-WCS-002-C	Composite	8/24/94	10:25	8/25/94	1	0.00	74.27	82.23	472.15	6111.41	0.00
104	CLJ-WCS-003-C	Composite	8/24/94	10:55	8/25/94	1	0.00	102.98	113.03	859.01	17536.84	0.00
105	CLJ-WCS-004-C	Composite	8/24/94	10:58	8/25/94	1	0.00	328.13	0.00	1873.60	37492.10	0.00
144	CLJ-WCS-005	Large Trench	8/26/94	8:40	8/26/94	1	0.00	120.18	0.00	0.00	28828.95	0.00
145	CLJ-WCS-006	Large Trench	8/26/94	8:50	8/26/94	1	0.00	189.77	149.11	0.00	44362.91	0.00
146	CLJ-WCS-007	Large Trench	8/26/94	8:54	8/26/94	1	0.00	130.94	125.37	0.00	22792.27	0.00
147	CLJ-WCS-008	Small Trench	8/26/94	9:02	8/26/94	1	0.00	0.00	0.00	0.00	2567.54	0.00
148	CLJ-WCS-009	Small Trench	8/26/94	9:10	8/26/94	1	0.00	254.53	0.00	0.00	69033.19	0.00
149	CLJ-WCS-010	Stock Pile	8/26/94	10:07	8/26/94	1	0.00	0.00	0.00	0.00	3419.05	0.00
150	CLJ-WCS-011	Stock Pile	8/26/94	10:15	8/26/94	1	0.00	0.00	0.00	0.00	313.14	0.00
151	CLJ-WCS-012	Stock Pile	8/26/94	10:25	8/26/94	1	0.00	130.13	0.00	0.00	14616.99	0.00

Action Limits Soils  
FOR OPERABLE UNIT 05

179 3000 50 4000 3000 621

FIELD NOTES

## DATA SUMMARY REPORT

DATE: 09/07/94

PAGE: 1

Company: OHM REMEDIATION SERVICES CORPORATION

Sample Point ID:	CLJ-WCS001	CLJ-WCS002	CLJ-WCS005	CLJ-WCS006	CLJ-WCS007	CLJ-WCS008	CLJ-WCS009	CLJ-WCS010
ASC Sample Number:	JN1786	JN1787	JN1788	JN1789	JN1790	JN1791	JN1792	JN1793
Sample Date:	940824	940824	940826	940826	940826	940826	940826	940826
Facility Code:	015226N	015226N	015226N	015226N	015226N	015226N	015226N	015226N

Parameters

Units

## Target Compound List Pesticide and PCB Analysis, GC, (GS25)

Parameters	Units	CLJ-WCS001	CLJ-WCS002	CLJ-WCS005	CLJ-WCS006	CLJ-WCS007	CLJ-WCS008	CLJ-WCS009	CLJ-WCS010
Aldrin	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Alpha-BHC	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Beta-BHC	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
alpha-Chlordane	mg/kg	<.020	<.018	.019	.028	.022	<.018	.043	<.020
gamma-Chlordane	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
4,4'-DDD	mg/kg	1.42	1.92	18.0	18.2	21.1	1.28	47.7	2.23
4,4'-DDE	mg/kg	.173	.142	.401	1.08	.316	.034	.694	.141
4,4'-DDT	mg/kg	2.65	7.46	39.9	32.6	43.0	3.82	117	5.21
Delta-BHC	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Dieldrin	mg/kg	<.020	.020	.048	.050	.054	<.018	.061	<.020
Endosulfan sulfate	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Endosulfan I	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Endosulfan II	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Endrin	mg/kg	<.020	.027	.121	.185	.061	<.018	.326	<.020
Endrin ketone	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Endrin aldehyde	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Gamma-BHC	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Heptachlor	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Heptachlor epoxide	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	.093	<.020
Methoxychlor	mg/kg	<.020	<.018	<.018	<.018	<.019	<.018	<.019	<.020
Toxaphene	mg/kg	<.396	<.362	<.360	<.363	<.381	<.350	<.379	<.401
Aroclor 1016	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200
Aroclor 1221	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200
Aroclor 1232	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200
Aroclor 1242	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200
Aroclor 1248	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200
Aroclor 1254	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200
Aroclor 1260	mg/kg	<.198	<.181	<.180	<.181	<.190	<.175	<.189	<.200



## DATA SUMMARY REPORT

DATE: 09/07/94

PAGE: 2

Company: OHM REMEDIATION SERVICES CORPORATION

Sample Point ID:	CLJ-WCS011	CLJ-WCS012
ASC Sample Number:	JN1794	JN1795
Sample Date:	940826	940826
Facility Code:	015226N	015226N

Parameters Units

## Target Compound List Pesticide and PCB Analysis, GC, (0825)

Aldrin	mg/kg	<.019	<.019
Alpha-BHC	mg/kg	<.019	<.019
Beta-BHC	mg/kg	<.019	<.019
alpha-Chlordane	mg/kg	<.019	<.019
gamma-Chlordane	mg/kg	<.019	<.019
4,4'-DDD	mg/kg	.203	4.55
4,4'-DDE	mg/kg	.033	.234
4,4'-DDT	mg/kg	.129	18.1
Delta-BHC	mg/kg	<.019	<.019
Dieldrin	mg/kg	<.019	.031
Endosulfan sulfate	mg/kg	<.019	<.019
Endosulfan I	mg/kg	<.019	<.019
Endosulfan II	mg/kg	<.019	<.019
Endrin	mg/kg	<.019	.086
Endrin ketone	mg/kg	<.019	<.019
Endrin aldehyde	mg/kg	<.019	<.019
Gamma-BHC	mg/kg	<.019	<.019
Heptachlor	mg/kg	<.019	<.019
Heptachlor epoxide	mg/kg	<.019	.025
Methoxychlor	mg/kg	<.019	<.019
Toxaphene	mg/kg	<.387	<.381
Aroclor 1016	mg/kg	<.194	<.191
Aroclor 1221	mg/kg	<.194	<.191
Aroclor 1232	mg/kg	<.194	<.191
Aroclor 1242	mg/kg	<.194	<.191
Aroclor 1248	mg/kg	<.194	<.191
Aroclor 1254	mg/kg	<.194	<.191
Aroclor 1260	mg/kg	<.194	<.191