0024

MAY 1999

MONTHLY PROGRESS REPORTS
POL SITES
MCB CAMP LEJEUNE
JACKSONVILLE, NORTH CAROLINA

Contract Nos.
N62470–93-D-3032
and
N62470-97-D-5000

Prepared for:

Environmental Management Division
MCB Camp Lejeune
Jacksonville, North Carolina

Prepared by:

OHM Remediation Services Corp.
A Member of THE IT GROUP

11560 Great Oaks Way, Suite 500
Alpharetta, GA 30022-2424

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 3* ***Date :*** *June 16,1999*

Contract Number : *N62470-97-D-5000*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *13* ***OHM Project No. :*** *20736*

(Battery Debris Removal Site 85, Camp Johnson Battery Dump)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

DISTRIBUTION :	***ADDRESS :***
Original to :	
COTR - Karen Wilson, Code 18311	6500 Hampton Blvd., Code 1831 LRA, Bldg. A, Rm. 2115 Norfolk, VA 23508-1297
One copy each to :	
One Copy to: ROICC: Rowse, Brent	ROICC/NAVFACENGCOM Contracts 1005 Michael Road Camp Lejeune, NC 28547-2521
One Copy to: RPM: Montegross, M	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Contract Specialist: Collier, Maribeth	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Activity Point of Contact Raines, Rick	Building 58: AC/S EMD/IR Marine Corps Base, PSC Box 20004 Camp Lejeune, NC 28542-0004
One Copy to: RPM Landman, K	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
Contract Admin.: Hussey, Julia Virginia Beach, V
File (5)

MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-97-D-5000 **Delivery Order No.** 0013 **Report Dates:** May 1, 1999 To May 31, 1999

Project Name: NTCRA at Site 85, Camp Johnson Battery Dump **Project Location:** MCB Camp Lejeune, N.C.

Project No.: 20736 **Project Manager:** James A. Dunn, Jr., P.E.

Project Description: Non-Time Critical Removal Action at Site 85, Camp Johnson Battery Dump consisting of removal of sixteen battery piles to be excavated and disposed of.

SHORT FORM STATUS

X	**Pre-Construction**		☐	**Post-Construction**	
X	**Site Walk**	(Date:00/00/00)		**Demobilization**	(Date: 00/00/00)
X	**Design Review**			**Post Con. Submittal**	(Due: 00/00/00)
X	**Cost Proposal**	(Submittal Date: 06/03/98)		**O&M**	(Completion Date: 00/00/00)

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**	**Modification Number Pending:**	
	Regulatory Issue(s)		**Submittal Review**	**Date submitted:**	(00/00/00)
	Analytical		**Postponement**	**Amount:**	$

Significant Activities Performed/Associated With Item(s) Above: Resubmitted Work Plans incorporating comments whith modified Clean-up goals to all parties for final approval in May.

Schedule Information (updates and variances): Current schedule is attached.

Financial Information:

Current D.O. Ceiling (w/o fee):	$	$ 99,346.00
Total $ to Date (w/o fee)	$	8,501.00
Estimated Report Period $:	$	2,577.00
Forecast @ Completion:	$	$ 99,346.00

Other Information: None.

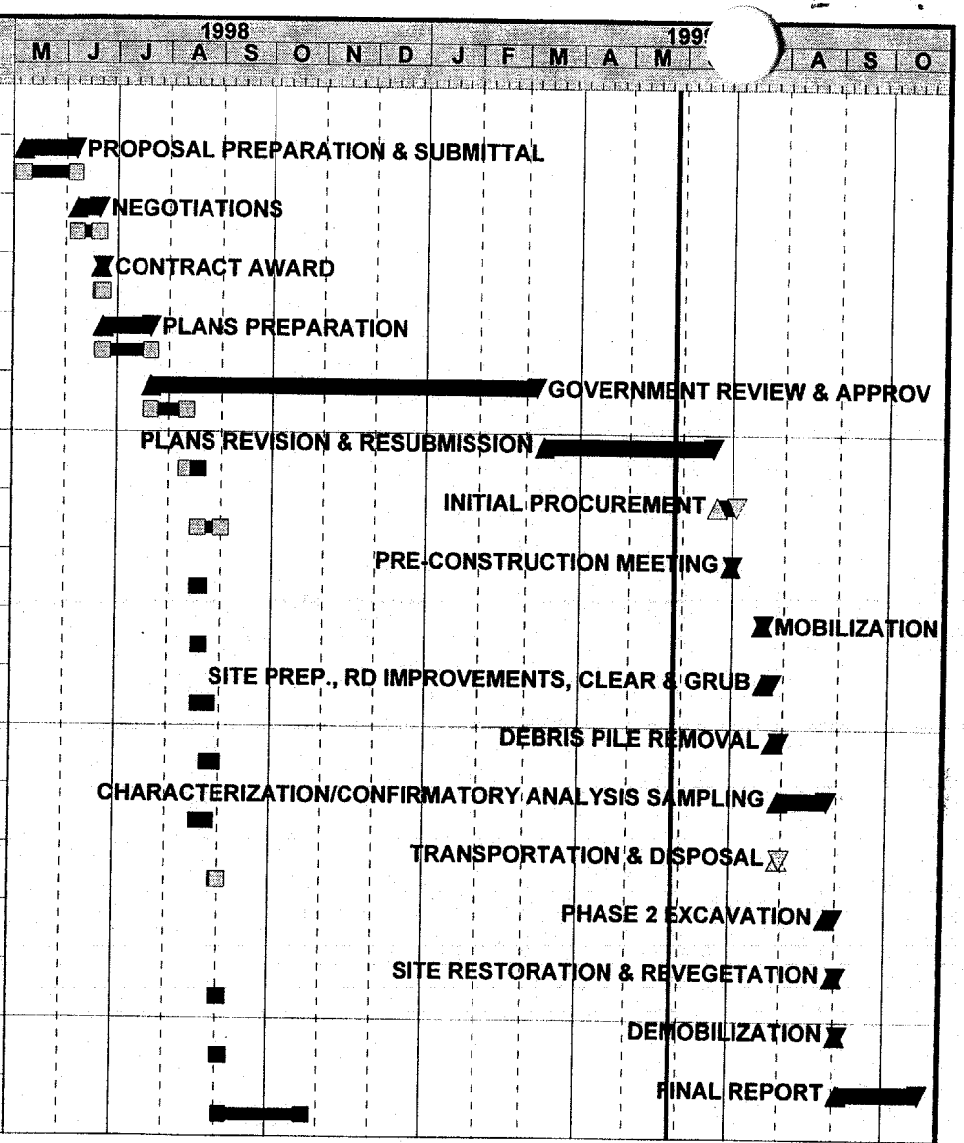
Approved by:

John P. Franz

John P. Franz, P.E.
Program Manager

D.O. 13: Site 85 - Battery Debris Removal

Activity ID	Activity Description	Orig Dur	Early Start	Finish
01000000	PROPOSAL PREPARATION & SUBMITTAL	22	07MAY98A	05JUN98A
01010000	NEGOTIATIONS	10	08JUN98A	19JUN98A
01020000	CONTRACT AWARD	1	22JUN98A	22JUN98A
02000000	PLANS PREPARATION	20	23JUN98A	20JUL98A
03000000	GOVERNMENT REVIEW & APPROVAL	15	21JUL98A	05MAR99A
03010000	PLANS REVISION & RESUBMISSION	72	11MAR99A	18JUN99
04000000	INITIAL PROCUREMENT	10	21JUN99	02JUL99
04010000	PRE-CONSTRUCTION MEETING	1	30JUN99	30JUN99
05010000	MOBILIZATION	1	19JUL99	19JUL99
05020000	SITE PREP., RD IMPROVEMENTS, CLEAR & GRUB	4	20JUL99	23JUL99
05040000	DEBRIS PILE REMOVAL	3	26JUL99	28JUL99
05030000	CHARACTERIZATION/CONFIRMATORY ANALYSIS SAMPLING	20	29JUL99	25AUG99
05050000	TRANSPORTATION & DISPOSAL	1	29JUL99	29JUL99
05055000	PHASE 2 EXCAVATION	3	26AUG99	30AUG99
05060000	SITE RESTORATION & REVEGETATION	2	31AUG99	01SEP99
05070000	DEMOBILIZATION	1	02SEP99	02SEP99
06000000	FINAL REPORT	35	03SEP99	21OCT99



Project Start	01MAY98
Project Finish	21OCT99
Data Date	28MAY99
Run Date	08JUN99

Early Bar
Target Bar
Progress Bar
Critical Activity

0599

Sheet 1 of 1

OHM Remediation Services Corporation
Site 85 - Battery Debris Removal
MCB, Camp Lejune, North Carolina

05/28/99 Update

Date	Revision	Checked	Approved

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 3* ***Date :*** *June 16,1999*

Contract Number : *N62470-97-D-5000*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *17* ***OHM Project No. :*** *20901*

(Soil Remediation at Ranges F-11, B-12, I-1)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

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Original to :	
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OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
Contract Admin.: Hussey, Julia Virginia Beach, V
File (5)

MONTHLY PROGRESS REPORT
CONTRACT N62470-97-D-5000
DELIVERY ORDER 0017
May 31, 1999

MAINTANANCE ACTIVITIES AT RANGES B-12, F-11 AND I-1

MCB CAMP LEJEUNE, NORTH CAROLINA
Project Manager: Jim Dunn
Approved by:

John P. Franz
Program Manager

1.0 INTRODUCTION

This Monthly Progress Report has been prepared to summarize the activities performed from May 1, 1999 to May 31, 1999, as well as a summary of the work planned for the month of June 1999 by OHM Remediation Services Corp., (OHM), on Delivery Order 0017 of the Navy-LANTDIV RAC Contract N62470-97-D-5000. This delivery order was signed on July 14, 1998 for a site visit, work plans and estimate preparation for maintenance activities at Ranges B-12, F-11 and I-1 at MCB Camp Lejeune, North Carolina. Subsequent modification to this delivery order has been issued to provide for the excavation, screening, stabilization and re-installation of berm soils, the installation of four bullet traps, sidewalls, sidewalks and baffles.

The remediation effort consists of:

1. Preparation of Work Plans for the lead removal action.
2. Field screening of the soils to determine the limits of contamination.
3. Excavation, transportation and disposal of the contaminated soils.
4. Verification sampling, backfilling and site restoration.
5. Provision of soil remediation of berms at all three ranges.
6. Provide bullet traps and service power to all three ranges.
7. Provision of sidewalls, sidewalks and baffles for all three ranges.
8. Issuance of Contractor's Closeout Report.

Such work is specified in the Statement of Work, dated August 12,1998 and OHM's revised proposal dated September 14, 1998. The total delivery order value to date, including approved modifications, is $1,444,921.00 cost plus $51,645.00 fee.

2.0 WORK ACCOMPLISHED

During the month of May 1999, OHM has performed the following:

1. Participated in BOD at Range B-12.
2. Completed bullet trap installation at Range I-1.

3. Commenced and completed installation of the baffle and sidewalls at Range I-1.
4. Commenced and completed provision of electrical primary service to Range I-1.
5. Commenced and completed screening activities at Range F-11.
6. Formed and poured bullet trap slabs at Range F-11.
7. Received Modification No. 2 to provide underground routing for electrical service to Range I-1.

3.0 WORK PLANNED

During the month of June 1999, OHM is scheduled to perform the following:

1. Install bullet traps at Range F-11.
2. Participate in BOD at Range I-1.
3. Commence installation of sidewalls and baffles at Range F-11.
4. Commence electrical installation at Range F-11.
5. Transport and recycle all recovered lead materials.

4.0 PROBLEMS AND SOLUTIONS

No new issues were discovered during the month and all previous problems have been satisfactorily resolved.

5.0 COST/SCHEDULE SUMMARY

Cost Summary:

The following is a summary of the costs associated with this delivery order. A detailed performance report is attached.

D.O. ceiling amount (without fee)	$1,444,921.00
Approximate cost through May 1999	$1,121,143.00
Approximate cost for May 1999	$ 131,838.00
Remaining funds	$ 323,778.00
Estimated cost to complete	$ 346,612.00
Current period estimate at complete	$1,467,755.00
Prior period estimate at complete	$1,475,609.00
Physical % complete	76.21%
Financial % complete	77.59%

The current estimated cost at completion indicates a potential cost overrun. During May, inclement weather resulted in no reduction to the potential overrun. This overrun is due primarily to unsatisfactory soils at Range B-12 which required an excessive amount of time to excavate and stabilize and caused us to import select fill to establish a foundation for the bullet trap slab and the sidewalks (firing positions). It remains possible, however, that the potential cost overrun could be absorbed by improved performance of the remaining work at Range F-11. Additionally, we have been informally requested to prepare a quotation for the provision of target walls at four traps. We are in the process of preparing a modification request for these walls.

Schedule Summary:

Original contract completion date	04/14/00
Current contract completion date	04/14/00

Prior period schedule construction completion date	07/21/99
Current period schedule construction completion date	07/30/99

6.0 NON-COMPLIANCE CHECKOFF LIST

No non-compliance issues have been associated with this delivery order.

7.0 WASTE MATERIALS TRACKING

No waste materials were routed to disposal under this delivery order during this reporting period.

8.0 GOVERNMENT MATERIALS TRACKING

No government owned materials have been utilized on this delivery order.

9.0 MODIFICATION LOG

One modification has been issued under this delivery order at this time and a second modification is pending. The current Mod log is attached.

10.0 WORK DIRECTIVE LOG

One work directive has been issued under this delivery order for the provision of target supports for Range B-12.

11.0 ATTACHMENTS

Performance Report (1 page)
Current Schedule (2 pages)
Modification Log (1 page)

LANTDIV PROJ
Delivery Orde

Maintenance of Ranges B-12, F-11 and I-1, MCB Camp Lejeune

PERFORMANCE REPORT
Actual Dollars as of 5/28/99
NOTE: ALL DOLLARS INCLUDE MARK-UPS; AWARD FEE IS NOT INCLUDED

BOLD OVERRIDE AUTOMATIC CALCULATION

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
WBS CODE	DESCRIPTION	CURRENT BUDGETED QUANTITY	QUANTITY REVISIONS/ ADJUSTMENTS	PROJECTED QUANTITY AT COMPLETION (C + D)	TASK UNIT	INSTALLED QUANTITY	TASK PERCENT COMPLETE (G / E)	CURRENT BUDGETED DOLLARS	DOLLAR REVISIONS/ ADJUSTMENTS (D x O)	PROJECTED BUDGETED DOLLARS (I + J)	EARNED DOLLARS (H x K)	ACTUAL DOLLARS TO DATE	CPI (M / L)	BUDGETED COST/UNIT (I / C)	ACTUAL COST/UNIT TO DATE (M / G)	ETC BASED ON ACTUAL COSTS TO DATE (see note Q)	FORECAST (BUDGET IF LESS THAN 15% COMPLETE) (M + Q)	VARIANCE FROM CURRENT BUDGET (R - I)	PERCENT OF TOTAL PROJECT (K/TOTAL K)	PHYSICAL PERCENT COMPLETE (H x T)
20000000	Mobilization	100	0	100	%	100	100.0%	6,500	0	6,500	6,500	4,037	0.62	65.00	40.37	0	4,037	(2,463)	0.45%	0.45%
20100000	Mob / Demob Furloughs	100	0	100	%	42	42.0%	11,498	0	11,498	4,829	4,706	0.97	114.98	112.05	6,499	11,205	(293)	0.80%	0.33%
22000000	Treatability Study	100	0	100	%	100	100.0%	3,386	0	3,386	3,386	0	0.00	33.86	0.00	0	0	(3,386)	0.23%	0.23%
25000000	Site Setup	100	0	100	%	75	75.0%	116,111	0	116,111	87,083	88,490	1.02	1,161.11	1,179.86	20,000	108,490	(7,621)	8.04%	6.03%
30000000	Excavate Berm Soils	100	0	100	%	100	100.0%	34,057	0	34,057	34,057	16,711	0.49	340.57	167.11	0	16,711	(17,346)	2.36%	2.36%
34000000	Vibratory Screen Berm Soil	100	0	100	%	100	100.0%	52,019	0	52,019	52,019	32,421	0.62	520.19	324.21	0	32,421	(19,598)	3.60%	3.60%
35000000	Lead Contamination Stabilization	100	0	100	%	50	50.0%	100,159	0	100,159	50,080	20,485	0.41	1,001.59	409.69	15,000	35,485	(64,674)	6.93%	3.47%
36000000	Stabilization Sampling	100	0	100	%	50	50.0%	4,289	0	4,289	2,145	1,035	0.48	42.89	20.70	1,035	2,070	(2,219)	0.30%	0.15%
40000000	Rebuild Berms	100	0	100	%	100	100.0%	21,425	0	21,425	21,425	9,616	0.45	214.25	96.16	5,000	14,616	(6,809)	1.48%	1.48%
41000000	Replace/Repair Walks	100	0	100	%	50	50.0%	29,907	0	29,907	14,954	16,221	1.08	299.07	324.42	16,221	32,442	2,535	2.07%	1.03%
42000000	Concrete Slab for Bullet	100	0	100	%	100	100.0%	36,418	0	36,418	36,418	39,915	1.10	364.18	399.15	0	39,915	3,497	2.52%	2.52%
45000000	T&D Analysis	100	0	100	%	0	0.0%	1,287	0	1,287	0	22	N/A	12.87	N/A	1,265	1,287	0	0.09%	0.00%
46000000	T&D Concrete Debris	100	0	100	%	25	25.0%	950	0	950	238	3,864	15.43	9.50	146.54	10,991	14,654	13,704	0.07%	0.02%
47000000	Recycle Bullets (Lead)	100	0	100	%	0	0.0%	24,792	0	24,792	0	0	N/A	247.92	N/A	24,792	24,792	0	1.72%	0.00%
50000000	Site Restoration	100	0	100	%	25	25.0%	8,228	0	8,228	2,057	6,603	3.21	82.28	264.12	19,809	26,412	18,184	0.57%	0.14%
60000000	Site Tear Down	100	0	100	%	0	0.0%	6,789	0	6,789	0	0	N/A	67.89	N/A	6,789	6,789	0	0.47%	0.00%
61000000	Demobilization	100	0	100	%	50	50.0%	3,209	0	3,209	1,605	3,614	2.25	32.09	72.28	3,614	7,228	4,019	0.22%	0.11%
65000000	Final Reporting	100	0	100	%	0	0.0%	7,840	0	7,840	0	0	N/A	78.40	N/A	7,840	7,840	0	0.54%	0.00%
81200000	Timber Wall F11, B12, I1	100	0	100	%	50	50.0%	44,865	0	44,865	22,433	67	0.00	448.65	1.35	22,000	22,067	(22,798)	3.11%	1.55%
81600000	I1 Baffle Construction	100	0	100	%	95	95.0%	34,925	0	34,925	33,179	75,060	2.26	349.25	790.10	3,951	79,010	44,085	2.42%	2.30%
81700000	B12 Baffle Construction	100	0	100	%	100	100.0%	25,940	0	25,940	25,940	113,822	4.39	259.40	1,138.22	0	113,822	87,882	1.80%	1.80%
81800000	F11 Baffle Construction	100	0	100	%	30	30.0%	69,849	0	69,849	20,955	20,895	1.00	698.49	696.48	48,754	69,648	(201)	4.83%	1.45%
82100000	Preliminary Workplan	100	0	100	%	100	100.0%	8,491	0	8,491	8,491	8,865	1.04	84.91	88.65	0	8,865	374	0.59%	0.59%
82400000	Range I1 Bullet Trap	100	0	100	%	100	100.0%	169,872	0	169,872	169,872	170,414	1.00	1,698.72	1,704.14	0	170,414	542	11.76%	11.76%
82500000	Range B12 Bullet Trap	100	0	100	%	100	100.0%	123,698	0	123,698	123,698	116,284	0.94	1,236.98	1,162.84	0	116,284	(7,413)	8.56%	8.56%
82600000	Rage F11 Bullet Trap	100	0	100	%	85	85.0%	353,725	0	353,725	300,666	300,007	1.00	3,537.25	3,529.50	52,942	352,950	(775)	24.46%	20.81%
83100000	Preliminary Site Visit - South	100	0	100	%	100	100.0%	6,364	0	6,364	6,364	823	0.13	63.64	8.23	0	823	(5,541)	0.44%	0.44%
84200000	Estimate Prep	100	0	100	%	100	100.0%	7,236	0	7,236	7,236	3,553	0.49	72.36	35.53	0	3,553	(3,683)	0.50%	0.50%
99000110	Admin & Support	100	0	100	%	50	50.0%	88,609	0	88,609	44,305	34,450	0.78	886.09	689.01	34,450	68,901	(19,708)	6.13%	3.07%
99090000	Per Deims	100	0	100	%	50	50.0%	42,483	0	42,483	21,242	22,996	1.08	424.83	459.92	22,996	45,992	3,509	2.94%	1.47%
90000000	Fuel	100	0	100	%	50	50.0%	0	0	0	0	3,731	N/A	0.00	74.62	3,731	7,462	7,462	0.00%	0.00%
23000000	New Target Walls	100	0	100	%	0	0.0%	0	0	0	0	2,637	N/A	0.00	N/A	18,933	21,570	21,570	0.00%	0.00%
		100	0	100	%	0	0.0%	0	0	0	0	0				0				
	TOTAL PROJECT COSTS							1,444,921	0	1,444,921	1,101,173	1,121,143	1.02			346,612	1,467,755	(6,198)	100.00%	76.21%

NOTES: Note Q: Calculation of ETC is "@IF(G25=0,K25-M25,@IF(H25>0.15,(E25-G25)*P25,@IF(M25<K25,K25-M25,(E25-G25)*P25)))"

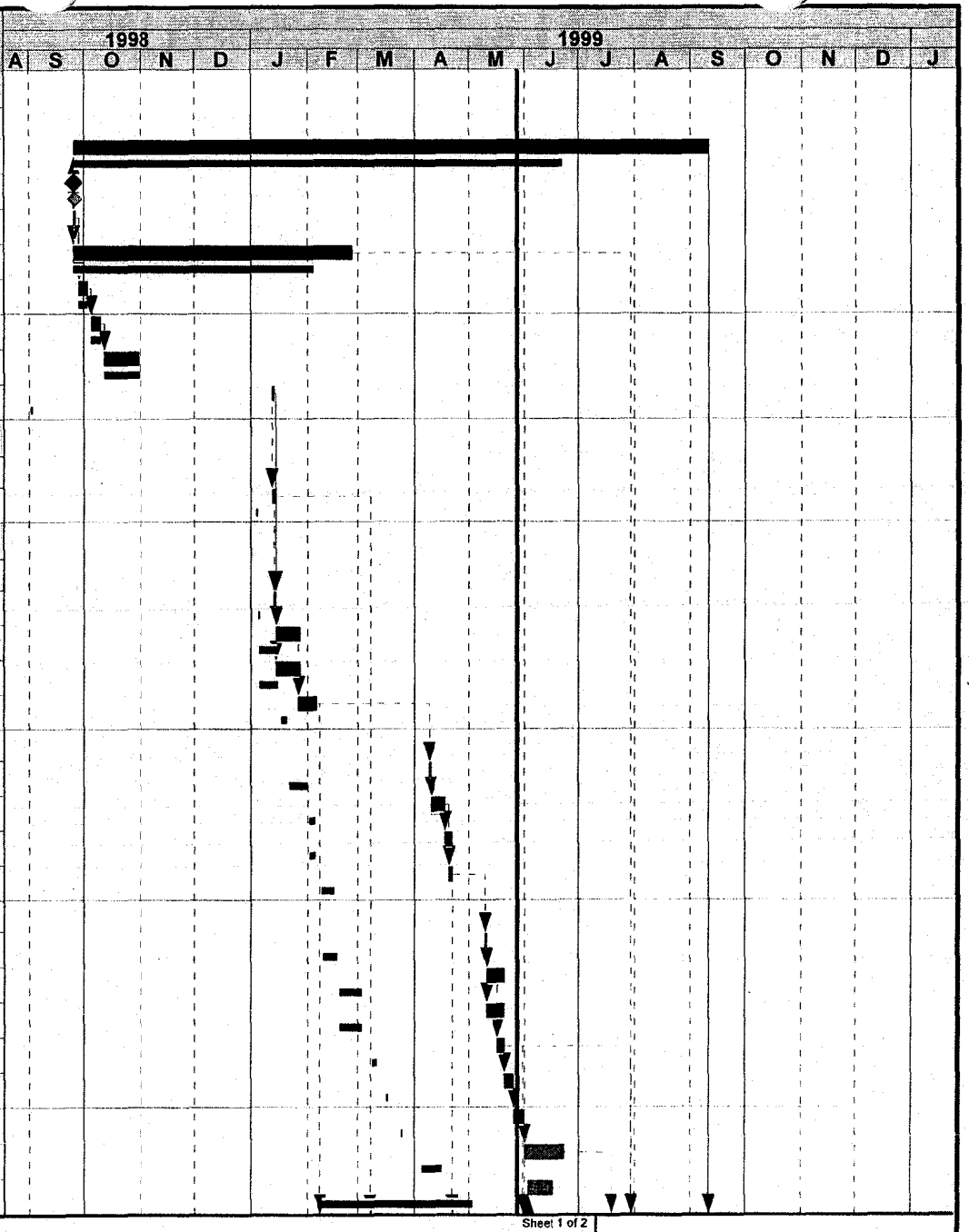
1) While it is still early in the field activities, current trends indicate that we will be able to complete the base project within the funding levels.
2) Another modification to construct target walls at four traps is anticipated and will eliminate projected cost overrun.
3)
4)
5)

FINANCIAL PERCENT COMPLETE (M / I) 77.59%
(of Current Budgeted Dollars)

VARIANCE ANALYSIS:

1)
2)
3)
4)
5)
6)
7)
8)

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
Home Office				
Premobilization				
09000000	Project Support	247*	25SEP98A	10SEP99
01000000	Contract Award	0	25SEP98A	
01000100	Pre Mobilization Screening	1	25SEP98A	25SEP98A
01000300	Procurement	90	25SEP98A	25FEB99A
01000200	Treatability Study	5	28SEP98A	02OCT98A
01000400	T&D Analysis	5	05OCT98A	09OCT98A
01000500	Submittals Review & Approve	15	12OCT98A	30OCT98A
01000600	Preconstruction Meeting	1	13JAN99A	13JAN99A
Mobilization				
Mobilization				
02000100	Mobilization	1	13JAN99A	14JAN99A
Crew No. 1				
Range B-12				
03000100	Setup Screen at Site B-12	1	14JAN99A	14JAN99A
03000200	Excavate B-12 Berm Soils	8	15JAN99A	27JAN99A
03000300	Vibratory Screening B-12 Berm Soils	8	15JAN99A	27JAN99A
03000400	Lead Contamination Stabilization, Range B-12	3	27JAN99A	05FEB99A
Range I-1				
04000100	Setup Screen at Site I-1	1	09APR99A	09APR99A
04000200	Excavate I-1 Berm Soils	8	10APR99A	17APR99A
04000300	Vibratory Screening I-1 Berm Soils	10	18APR99A	21APR99A
04000400	Lead Contamination Stabilization, Range I-1	2	20APR99A	21APR99A
Range F-11				
05000100	Setup Screen at Site F-11	1	10MAY99A	10MAY99A
05000200	Excavate F-11 Berm Soils	10	11MAY99A	20MAY99A
05000300	Vibratory Screening F-11 Berm Soils	10	11MAY99A	20MAY99A
05000400	Lead Contamination Stabilization, Range F-11	4	17MAY99A	20MAY99A
05000600	Rebuild Berms, Range F-11	6	21MAY99A	25MAY99A
05000700	Concrete Slab for Bullet Trap, Range F-11	6	26MAY99A	31MAY99A
05000800	Install Bullet Trap, Range F-11	16	01JUN99	22JUN99
05000500	Overhead Power to Range Site F-11	10	03JUN99	16JUN99



Project Start 01SEP98
Project Finish 01SEP00
Data Date 26MAY99
Run Date 08JUN99

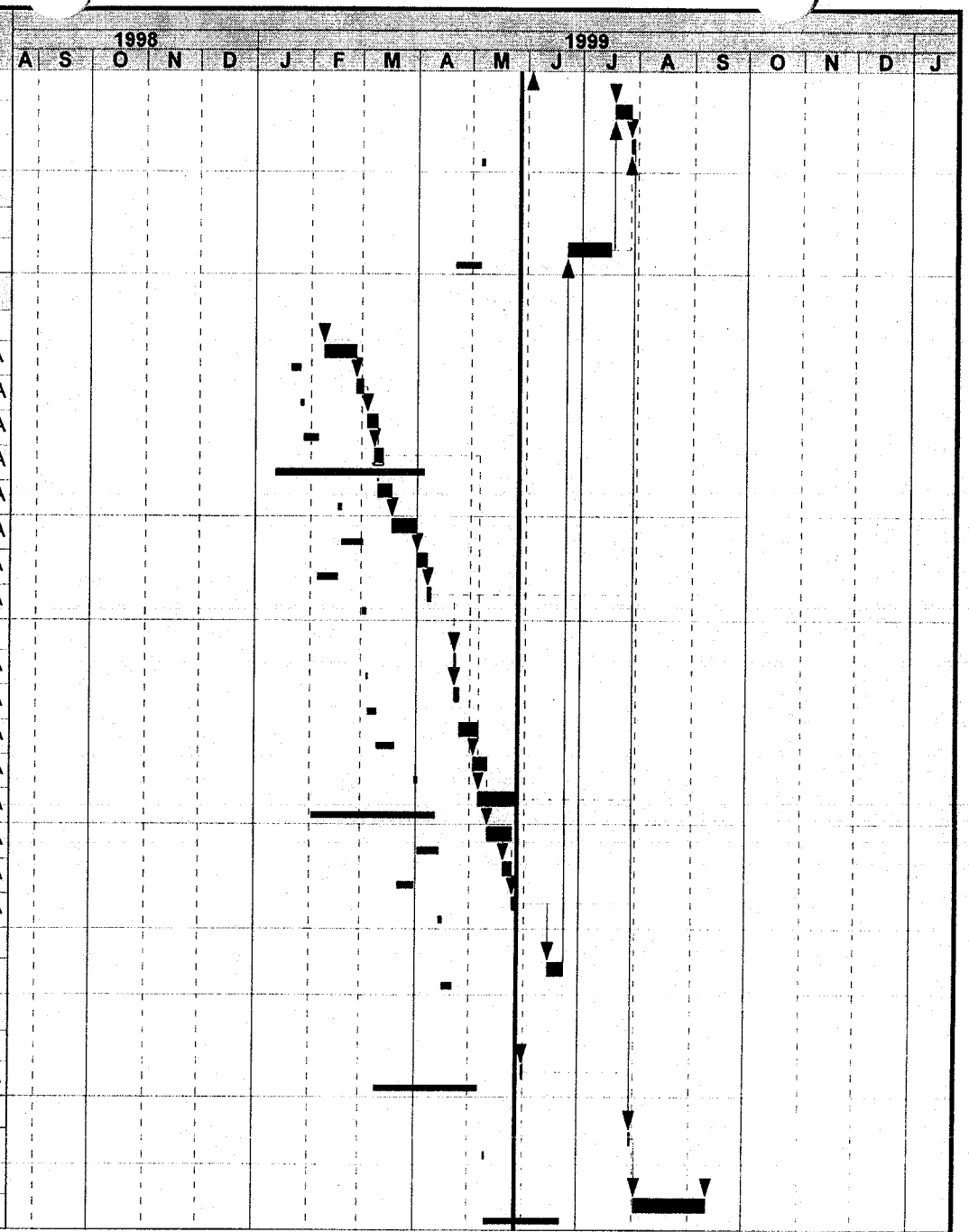
Early Bar
Target Bar
Progress Bar
Critical Activity

0599

Sheet 1 of 2

OHM Remediation Services
LANTDIV D.O. 017 (920901)
Ranges B-12, I-1 and F-11

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
Range F-11				
05000900	Install Sidewalk, Range F-11	7	19JUL99	27JUL99
05001200	Site F-11Restoration	2	28JUL99	29JUL99
Combined Crew No. 1 & No. 2				
Range F-11				
05001100	Construct Baffle, Range F-11	18	23JUN99	16JUL99
Crew No. 2				
Range B-12				
03000600	Rebuild Berms, Range B-12	3	08FEB99A	25FEB99A
03000700	Concrete Slab for Bullet Trap, Range B-12	2	26FEB99A	01MAR99A
03000800	Install Bullet Trap, Range B-12	4	04MAR99A	09MAR99A
03000500	Subsurface Power to Range Site B-12	5	08MAR99A	12MAR99A
03001000	Build Walls, Range B-12	2	10MAR99A	17MAR99A
03001100	Construct Baffle, Range B-12	8	18MAR99A	31MAR99A
03000900	Install Sidewalk, Range B-12	4	01APR99A	06APR99A
03001200	Site B-12 Restoration	2	07APR99A	08APR99A
Range I-1				
04000600	Rebuild Berms, Range I-1	1	22APR99A	22APR99A
04000700	Concrete Slab for Bullet Trap, Range I-1	3	22APR99A	24APR99A
04000800	Install Bullet Trap, Range I-1	11	25APR99A	05MAY99A
04001000	Build Walls, Range I-1	6	03MAY99A	10MAY99A
04000500	Overhead Power to Range Site I-1	15	06MAY99A	26MAY99A
04001100	Construct Baffle, Range I-1	10	11MAY99A	24MAY99A
04000900	Install Sidewalk, Range I-1	4	20MAY99A	24MAY99A
04001200	Site I-1Restoration	2	25MAY99A	26MAY99A
Range F-11				
05001000	Build Walls, Range F-11	7	14JUN99	22JUN99
Project Demoblization				
Demobilize Screen				
02000200	Demobilize Screen	1	31MAY99A	31MAY99A
Project Demobilization				
02000300	Project Demobilization	1	30JUL99	30JUL99
Final Report				
02000400	Final Report	30	02AUG99	10SEP99



NAVY-LANTDIV MODIFICATION LOG

Contract Number: N62470-97-D-5000
Contract Name: Navy LANTDIV RAC
Delivery Order: 0017
Project Name: Range maintenance Activities Ranges B-12, F-11, & I-1
MCB Camp Lejeune
Jacksonville, NC

Project Manager's Name: James A. Dunn, Jr., P.E.

Project Number: 920901
Date: 31-May-99

DESCRIPTION (a)	REQUESTOR NAVY-LANTDIV REP (b)	REQUEST FOR MODIFICATION ©	GOVERNMENT MODIFICATION NUMBER (d)	DATE AWARDED (e)	AMOUNT SUBMITTED (f)	AMOUNT APPROVED W/O FEE (g)	AWARD FEE (h)
Initial site visit, work plans and estimate prep.	LANTDIV	Original D.O.	Original D.O.	07/14/98		$22,092.00	$1,309.00
Excavate, screen, stabilize and re-install berm soils, install bullet traps, sidewalls, sidewalks and baffles at Ranges B-12, F-11 & I-1	LANTDIV	1	1	09/29/98		$1,415,699.00	$50,093.00
Provide underground primary electric service at Range I-1 in lieu of overhead	ROICC	2	2	05/15/99	$7,373.71	$7,131.00	$243.00
					TOTAL COST AND AWARD FEE	$1,496,567.00	

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 3* ***Date :*** *June 16,1999*

Contract Number : *N62470-97-D-5000*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *22* ***OHM Project No. :*** *776506*

(Replacement of Fire Fighting Training Facilities)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

DISTRIBUTION :	***ADDRESS :***
Original to :	
COTR - Karen Wilson, Code 18311	6500 Hampton Blvd., Code 1831 LRA, Bldg. A, Rm. 2115 Norfolk, VA 23508-1297
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One Copy to: ROICC: Rowse, Brent	ROICC/NAVFACENGCOM Contracts 1005 Michael Road Camp Lejeune, NC 28547-2521
One Copy to: RPM: Montegross, M	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Contract Specialist: Collier, Maribeth	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Activity Point of Contact Raines, Rick	Building 58: AC/S EMD/IR Marine Corps Base, PSC Box 20004 Camp Lejeune, NC 28542-0004
One Copy to: RPM Landman, K	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
Contract Admin.: Hussey, Julia Virginia Beach, V
File (5)

MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-97-D-5000 **Delivery Order No.** 0022 **Report Dates:** May 1, 1999 To May 31, 1999

Project Name: Burn Pits, Sites 9 & 54 **Project Location:** MCB Camp Lejeune, N.C.

roject No.: 776506 **Project Manager:** James A. Dunn, Jr., P.E.

Project Description: Remediate burn pits by removal of contaminated soils, construction of new pits complete with propane supply system and mock-up trainers for fire fighting exercises.

SHORT FORM STATUS

X	**Pre-Construction**		☐	**Post-Construction**	
	Site Walk*	(Date:00/00/00)		**Demobilization**	(Date: 00/00/00)
X	**Design Review**			**Post Con. Submittal**	(Due: 00/00/00)
X	**Cost Proposal**	(Submittal Date: 09/08/98)		**O&M**	(Completion Date: 00/00/00)

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**
	Regulatory Issue(s)		**Submittal Review**
	Analytical		**Postponement**

Modification Number
Date submitted:
Amount:

Significant Activities Performed/Associated With Item(s) Above: Continued preparation of Work Plans and encountered ing discrepancy for Site 54. Currently working with Base to determine final location of mock-up and propane tanks. Received comments on Symtron submittals and preparing response. Anticipate submittal of complete Work Plans when site location selected. Continue to plan start of field activities in July 1999.

Schedule Information (updates and variances): Current schedule attached.

Financial Information:

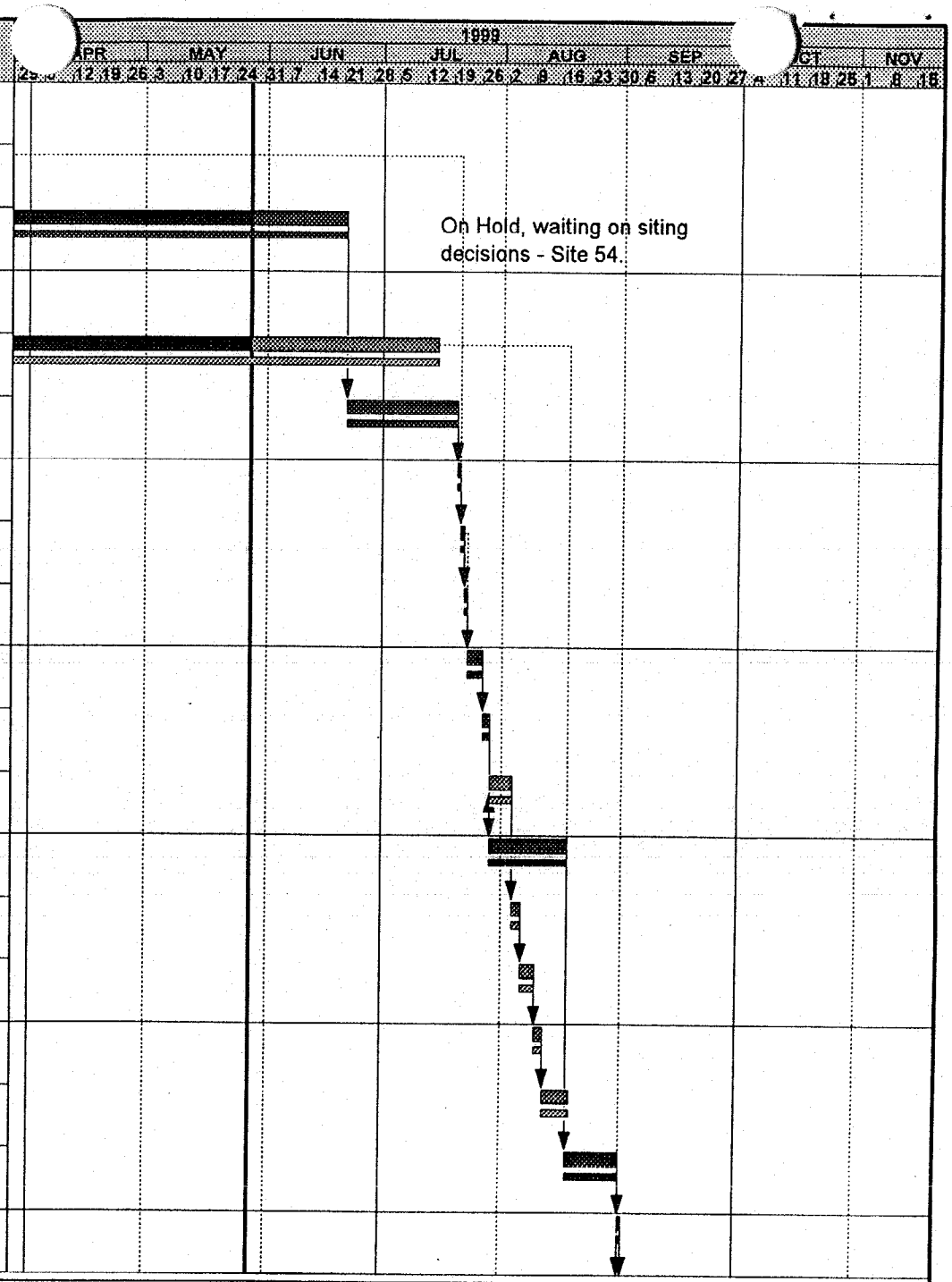
Current D.O. Ceiling (w/o fee):	$	949,320.00
Total $ to Date (w/o fee)	$	42,721.00
Estimated Report Period $:	$	10,932.00
Forecast @ Completion:	$	949,320.00

Other Information: None.

Approved by:

n P. Franz, P.E.
ogram Manager

Activity ID	Activity Description	Orig Dur	%	Early Start	Early Finish	Resource
1000	Concept	30	100	23OCT98A	15JAN99A	
1010	Concept Approval	21	100	18JAN99A	01MAR99A	
1200	Work Plans	110*	85	18JAN99A	21JUN99	
1020	Procurement of Fire Trainning Module	10	100	02MAR99A	15MAR99A	
1030	Order Module	85*	61	16MAR99A	14JUL99	
1210	Work Plan Approval	19	0	22JUN99	19JUL99	
1220	Preconstruction Meeting	1	0	20JUL99	20JUL99	
1040	Project Mobilization	1	0	21JUL99	21JUL99	
1110	Site 54, Site Setup	1	0	22JUL99	22JUL99	
1111	Site 54, Concrete Demolition	2	0	23JUL99	26JUL99	
1112	Site 54, Excavate Soils	2	0	27JUL99	28JUL99	
1121	Site 54, Install LP Piping	4	0	29JUL99	03AUG99	
1120	Site 54, Construct Trainning Area	14	0	29JUL99	17AUG99	
1130	Site 54, Install Concrete	2	0	04AUG99	05AUG99	
1131	Site 54, Install LP Tank/Pumps	2	0	06AUG99	09AUG99	
1140	Site 54, T & D Soil / Concrete	2	0	10AUG99	11AUG99	
1150	Site 54, UST Removal	5	0	12AUG99	18AUG99	
1170	Site 54, Installation of Fire Trainning Module	10	0	18AUG99	31AUG99	
1045	Site 9 Setup	1	0	01SEP99	01SEP99	



Project Start	14SEP98
Project Finish	06OCT99
Data Date	28MAY99
Run Date	08JUN99

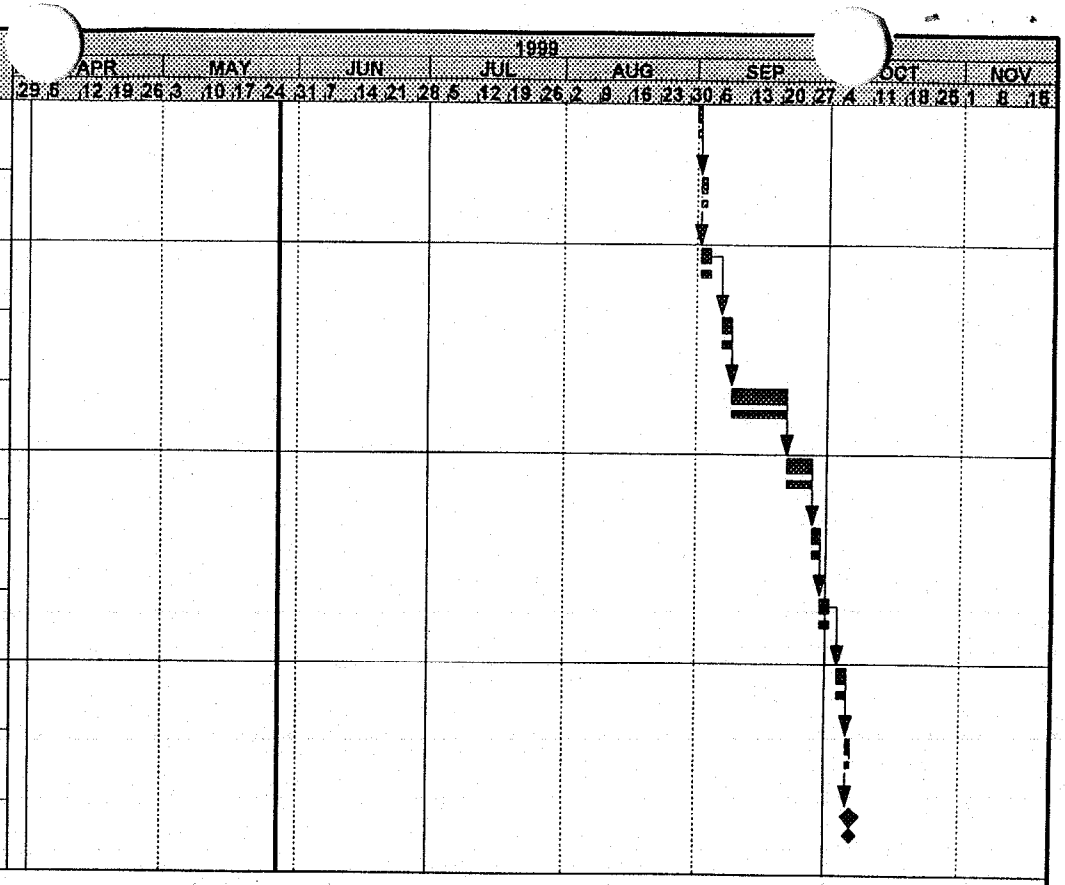
Early Bar
Target Bar
Progress Bar
Critical Activity

0528

Sheet 1 of 2

OHM Remediation Services Corp.
Fire Train Area
Delivery Order 22

Activity ID	Activity Description	Orig Dur	%	Early Start	Early Finish	Resource
1180	Site 54, Site Restoration	1	0	01SEP99	01SEP99	
1190	Site 54, Project Demobilization	1	0	02SEP99	02SEP99	
1046	Site 9, Concrete Demolition	2	0	02SEP99	03SEP99	
1047	Site 9, Excavate Soils	2	0	07SEP99	08SEP99	
1050	Site 9, Construct Trainning Area	9	0	09SEP99	21SEP99	
1060	Site 9, Install LP Piping	4	0	22SEP99	27SEP99	
1070	Site 9, Install Concrete Pad	2	0	28SEP99	29SEP99	
1080	Site 9, Install LP Tank & Pump	2	0	30SEP99	01OCT99	
1090	Site 9, T & D Soil / Concrete	2	0	04OCT99	05OCT99	
1100	Site 9, Restoration	1	0	06OCT99	06OCT99	
COMPLE	Project Complete	0	0		06OCT99	



Project Start	14SEP98
Project Finish	06OCT99
Data Date	28MAY99
Run Date	08JUN99

Early Bar
Target Bar
Progress Bar
Critical Activity

0528

OHM Remediation Services Corp.
Fire Train Area
Delivery Order 22

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 1* ***Date :*** *June 16,1999*

Contract Number : *N62470-93-D-3032*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *78* ***OHM Project No. :*** *17418*

(TCE Tanks(5-USTs)Removal - Bldg 25/Site 88)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

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Original to :	
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One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
File (5)

MONTHLY PROGRESS REPORT
CONTRACT N62470-93-D-3032
DELIVERY ORDER 0078
May 31, 1999

SOURCE REMOVAL ACTION – TCE TANKS
SUPPORT OF SURFACTANT TEST
BUILDING 25, SITE 88
MCB CAMP LEJEUNE, NORTH CAROLINA
OHM Project 917418
Project Manager: Jim Dunn

Approved by:

John P. Franz
Program Manager

1.0 INTRODUCTION

This Monthly Progress Report has been prepared to summarize the activities performed from May 1, 1999 to May 31, 1999, as well as a summary of the work planned for the month of June 1999 by OHM Remediation Services Corp., (OHM), on Delivery Order 0078 of the Navy-LANTDIV RAC Contract N62470-93-D-3032. This delivery order was signed on May 26, 1995.

The remediation effort consists of:

1. Preparations of plans, specifications and drawings
2. Relocation of an air compressor
3. Removal of five (5) underground storage tanks and contents
4. Excavation and disposal of contaminated soils from the tank pit
5. Installation of four (4) monitoring wells
6. Site restoration
7. Installation of power supply system for a surfactant test
8. Support services for surfactant test
9. Transportation and disposal of produced fluids from surfactant test

All work is to be performed in accordance with the Statement of Work and Specifications Section 01110 dated February 1995 and OHM's proposal dated May 8, 1995.

2.0 WORK ACCOMPLISHED

During the month of May 1999, OHM has performed the following:

1. Supported the surfactant treatment program by transporting, treating and disposing of produced fluids estimated at a flow rate of 1 gallon per minute treating a total of 54,000 gallons.

2. Participated in a visitor's day tour of the SEAR system.

3.0 WORK PLANNED

During the month of June 1999, OHM is scheduled to perform the following:

1. Continue to support the surfactant test program as required including transport and disposal of produced fluids through the North or South Plant.
2. Provide any additional support services as may be required by the treatment program.

4.0 PROBLEMS AND SOLUTIONS

No new issues were encountered during the month and all previous problems have been satisfactorily resolved.

5.0 COST/SCHEDULE SUMMARY

Cost Summary:

The following is a summary of the costs associated with this delivery order. A detailed performance report is attached.

D.O. ceiling amount (without fee)	$ 400,988.00
Approximate cost through May 1999	$ 291,722.00
Approximate cost for May 1999	$ 9,694.00
Remaining funds	$ 109,266.00
Estimated cost to complete	$ 108,102.00
Current period estimate at complete	$ 399,824.00
Prior period estimate at complete	$ 399,824.00
Physical % complete	70.48%
Financial % complete	72.75%

Current cost at completion estimate is based upon current revised scope of work.

Schedule Summary:

Original contract completion date	03/31/99
Current contract completion date	03/31/99
Prior period schedule completion date	09/30/99
Current period schedule completion date	09/30/99

Current period schedule completion date is based on revised scope of work associated with the surfactant test. This test is currently scheduled to complete in July 1999.

6.0 NON-COMPLIANCE CHECKOFF LIST

No non-compliance issues have been associated with this delivery order.

7.0 WASTE MATERIALS TRACKING

No new waste materials were generated during this reporting period.

8.0 GOVERNMENT MATERIALS TRACKING

No government owned materials have been utilized on this delivery order.

9.0 MODIFICATION LOG

One modification has been issued under this delivery order at this time. A Modification Log is attached to this report.

10.0 WORK DIRECTIVE LOG

No Work Directives have been issued for this delivery order.

11.0 ATTACHMENTS

Performance Report (1 page)
Current Schedule (1 page)
Modification Log (1 page)

LANTDIV PROGRAM
J# 18943

Job # 917418 D.O. # 078
PERFORMANCE REPORT
ACTUAL DOLLARS AS OF MAY 1999
NOTE: ALL DOLLARS INCLUDE MARK-UPS; AWARD FEE IS NOT INCLUDED

BOLD OVERRIDE AUTOMATIC CALCULATION

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
WBS CODE	DESCRIPTION	CURRENT BUDGETED QUANTITY Thru Mod 2	QUANTITY REVISIONS/ ADJUSTMNT	PROJECTED QUANTITY AT COMPLETION (C + D)	TASK UNIT	INSTALLED QUANTITY	TASK PERCENT COMPLETE (G / E)	CURRENT BUDGETED DOLLARS Thru Mod 2	DOLLAR REVISIONS ADJUSTMEN (O x O)	PROJECTED BUDGETED DOLLARS (I + J)	EARNED DOLLARS (H x K)	ACTUAL DOLLARS TO DATE FROM PTS	CPI (M / L)	BUDGETED COST/UNIT (I / C)	ACTUAL COST/UNIT TO DATE (M / G)	ETC BASED ON ACTUAL COSTS TO DATE (see note Q)	FORECAST (BUDGET IF LESS THAN 15 COMPLETE) (M + Q)	VARIANCE FROM CURRENT BUDGET (R - I)	PERCENT OF TOTAL PROJECT (K/TOTAL K)	PHYSICAL PERCENT COMPLETE (H x T)
0	Default WBS Code	100		100	%		0.0%	0	0	0	0	0	N/A	0.00	N/A	0	0	0	0.00%	0.00%
1000	All costs through February 1999	100		100	%	100	100.0%	242,557	0	242,557	242,557	242,439	1.00	2,425.57	2,424.39	0	242,439	(118)	60.49%	60.49%
1000010	Mobe Construction Equipment	100		100	%	100	100.0%	2,099	0	2,099	2,099	0	0.00	20.99	0.00	0	0	(2,099)	0.52%	0.52%
1000100	Pre-Con and Mutual Understanding Meeting	100		100	%	100	100.0%	1,249	0	1,249	1,249	0	0.00	12.49	0.00	0	0	(1,249)	0.31%	0.31%
1002000	Mobe Personnel	100		100	%	50	50.0%	1,073	0	1,073	537	0	0.00	10.73	0.00	0	0	(1,073)	0.27%	0.13%
1004000	Set Up/Construct Temporary Facilities	100		100	%	50	50.0%	14,823	0	14,823	7,412	0	0.00	148.23	0.00	0	0	(14,823)	3.70%	1.85%
2005000	Sampling Groundwater	100		100	%	30	30.0%	24,210	0	24,210	7,263	0	0.00	242.10	0.00	0	0	(24,210)	6.04%	1.81%
2013000	Onsite Laboratory Facilities	100		100	%	30	30.0%	31,939	0	31,939	9,582	0	0.00	319.39	0.00	0	0	(31,939)	7.97%	2.39%
6008000	Transport Fluids	100		100	%	30	30.0%	11,087	0	11,087	3,326	0	0.00	110.87	0.00	0	0	(11,087)	2.76%	0.83%
19021000	Transport Waste to Disposal Facility	100		100	%	0	0.0%	1,388	0	1,388	0	0	N/A	13.88	N/A	0	0	(1,388)	0.35%	0.00%
19022000	Disposal Fees and Taxes	100		100	%	0	0.0%	1,041	0	1,041	0	0	N/A	10.41	N/A	0	0	(1,041)	0.26%	0.00%
21001000	Remove Temporary Facilities	100		100	%	0	0.0%	4,632	0	4,632	0	0	N/A	46.32	N/A	0	0	(4,632)	1.16%	0.00%
21004000	Demobe Construction Equipment	100		100	%	0	0.0%	1,110	0	1,110	0	0	N/A	11.10	N/A	0	0	(1,110)	0.28%	0.00%
21005000	Demobe Personnel	100		100	%	0	0.0%	259	0	259	0	0	N/A	2.59	N/A	0	0	(259)	0.06%	0.00%
30000000	Building 25 Surfactant Test Support	100		100	%	30	30.0%	0	0	0	0	49,283	N/A	0.00	1,642.77	73,217	122,500	122,500	0.00%	0.00%
90000000	Fuel	100		100	%	0	0.0%	0	0	0	0	0	N/A	0.00	N/A	0	0	0	0.00%	0.00%
99001000	Supervision and Management	100		100	%	30	30.0%	6,803	0	6,803	2,041	0	0.00	68.03	0.00	0	0	(6,803)	1.70%	0.51%
99004000	Engineering	100		100	%	30	30.0%	2,399	0	2,399	720	0	0.00	23.99	0.00	0	0	(2,399)	0.60%	0.18%
99005000	Purchasing Assistance	100		100	%	30	30.0%	619	0	619	186	0	0.00	6.19	0.00	0	0	(619)	0.15%	0.05%
99016000	Per Diems	100		100	%	30	30.0%	2,652	0	2,652	796	0	0.00	26.52	0.00	0	0	(2,652)	0.66%	0.20%
99092000	Equipment	100		100	%	30	30.0%	16,163	0	16,163	4,849	0	0.00	161.63	0.00	0	0	(16,163)	4.03%	1.21%
80000000	Other work, not yet defined	100		100	%	0	0.0%	34,885	0	34,885	0	0	N/A	348.85	N/A	34,885	34,885	0	8.70%	0.00%
	TOTAL PROJECT COSTS							400,988	0	400,988	282,615	291,722	1.03			108,102	399,824	(1,164)	100.00%	70.48%

NOTES: Note Q: Calculation of ETC is "@IF(G25=0,K25-M25,@IF(H25>0.15,(E25-G25)*P25,@IF(M25<K25,K25-M25,(E25-G25)*P25)))"

1)
2)
3)
4)
5)

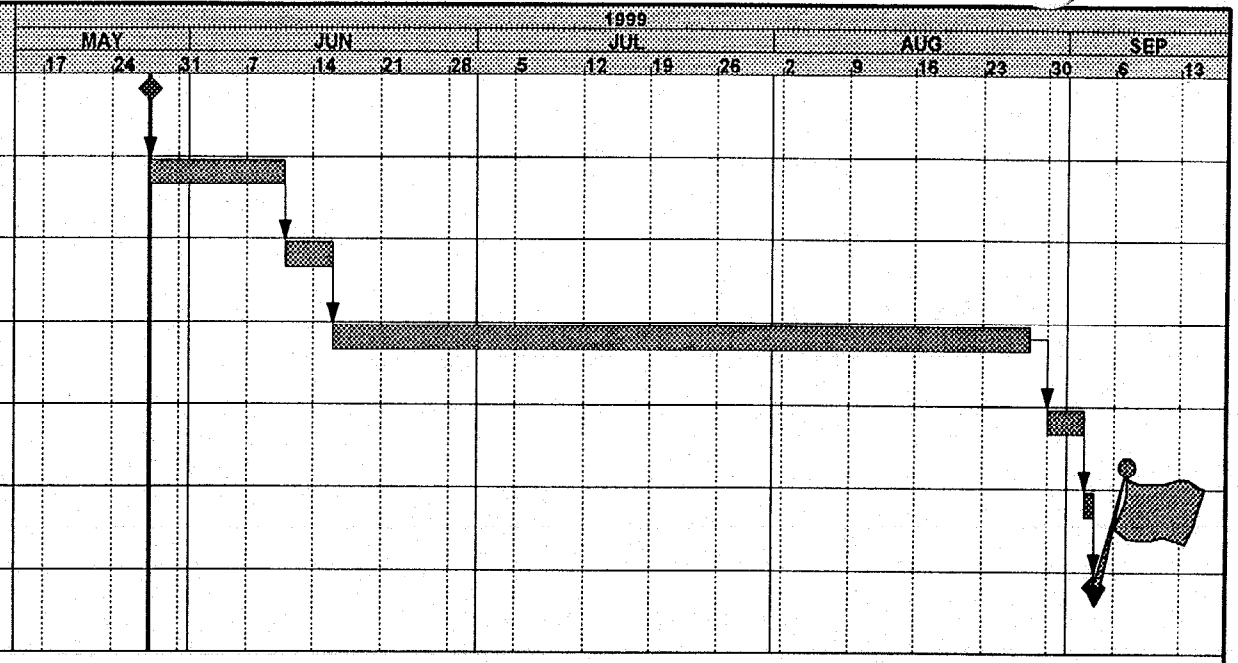
FINANCIAL PERCENT COMPLETE (M / I) 72.75%
(of Current Budgeted Dollars)

VARIANCE ANALYSIS:

1)

5)

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
1000	Mobilize	0	28MAY99	
1010	Set Up Pools and GC	10	28MAY99	10JUN99
1020	Precon	3	11JUN99	15JUN99
1030	Surfactant Test	53	16JUN99	27AUG99
1040	Tear Down Pools and GC	4	30AUG99	02SEP99
1050	Demobilize	1	03SEP99	03SEP99
1060	Project Complete	0		03SEP99



Project Start 15MAR99
Project Finish 03SEP99
Data Date 28MAY99
Run Date 06JUN99

Early Bar
Progress Bar
Critical Activity

0599

Sheet 1 of 1

IT/OHM Remediation
Surfactant Test Support
DO 0078 Project #917418

NAVY-LANTDIV MODIFICATION LOG

Contract Number: N62470-93-D-3032
Contract Name: Navy-LANTDIV RAC
Delivery Order: 078
Project Name: Surfactant Test and TCE Tank Removal – Building 25, Site 88
MCB Camp Lejeune, North Carolina

Project Manager's Name: James A. Dunn, Jr.
Project Number: 917418
Date: 31-May-99

DESCRIPTION (a)	REQUESTOR NAVY-LANTDIV REP (b)	REQUEST FOR MODIFICATION (c)	GOVERNMENT MODIFICATION NUMBER (d)	DATE AWARDED (e)	AMOUNT SUBMITTED (f)	AMOUNT APPROVED W/O FEE (g)	AWARD FEE (h)
Removal action for 5-9 underground storage tanks containing Varsol or PCE	M.B. Collier	NA	NA	26-May-95		$676,647	$40,751
Delete funds for transportation and disposal of 464.5 tons of contaminated soils due to 5 tanks versus 9 bid	M.B. Collier	01	01	07-March-96		($275,658)	($1,140)
					TOTAL COST AND AWARD FEE	$400,989	$39,611

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 1* ***Date :*** *June 16,1999*

Contract Number : *N62470-93-D-3032*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *83* ***OHM Project No. :*** *17536*

(Air Sparging System - Camp Geiger Site 35)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

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One Copy to: Activity Point of Contact: Raines, Rick	Building 58: AC/S EMD/IR Marine Corps Base, PSC Box 20004 Camp Lejeune, NC 28542-0004
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
File (5)

MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-93-D-3032 **Delivery Order No.** 0083 **Report Dates:** May 1, 1999 To May 31, 1999

Project Name: OU #10, Site 35 **Project Location:** MCB Camp Geiger

Project No.: 917536 **Project Manager:** James A. Dunn, Jr.

Project Description: Installation of a 100' air sparge test trench dug to a depth of 42' with a horizontal injection pipe and O&M of the system for 6 months.

SHORT FORM STATUS

☐ **Pre-Construction**

	Site Walk*	(Date:00/00/00)	
	Design Review*		
	Cost Proposal	(Due Date: 00/00/00)	

Post-Construction

	Demobilization	(Date: 00/00/00)
	Post Con. Submittal	(Due: 00/00/00)
X	**O&M**	(Completion Date: 05/28/99

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**
	Regulatory Issue(s)		**Submittal Review**
	Analytical		**Postponement**

Modification Number Pending:

Date submitted: (00/00/00)

Amount: $

Significant Activities Performed/Associated With Item(s) Above: Q&M of Phase I air sparge test trench. System remains in operation at request of Base. Second six month report is in preparation and should be submitted in During June 1999.

Schedule Information (updates and variances): System will continue in operation indefinitely with sampling and Analyses performed monthly.

Financial Information:

Elevated monthly costs reflect purchase of Air compressor and components.

Current D.O. Ceiling (w/o fee):	$	672,078.00
Total $ to Date (w/o fee)	$	513,855.00
Estimated Report Period $:	$	4,608.00
Forecast @ Completion: Phase I	$	550,000.00

Other Information: Under run will be utilized to perform Phase II activities augmented with additional funds.

Approved by:

John P. Franz, P.E.
Program Manager

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 1* ***Date :*** *June 16,1999*

Contract Number : *N62470-93-D-3032*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *100* ***OHM Project No. :*** *18319*

(Pesticide Soils Removal - Site 80 - C.L.)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

DISTRIBUTION :	***ADDRESS :***
Original to :	
COTR - Karen Wilson, Code 18311	6500 Hampton Blvd., Code 1831 LRA, Bldg. A, Rm. 2115 Norfolk, VA 23508-1297
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One Copy to: Contract Specialist: Collier, Maribeth	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: RPM: Montegross, M	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Activity Point of Contact: Raines, Rick	Building 58: AC/S EMD/IR Marine Corps Base, PSC Box 20004 Camp Lejeune, NC 28542-0004
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
File (5)

MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-93-D-3032 **Delivery Order No.** 0100 **Report Dates:** May 1, 1999 to May 31, 1999

Project Name: Site 3, O. U. 12 **Project Location:** MCB Camp Lejeune

Project No.: 918319 **Project Manager:** James A. Dunn, Jr.

Project Description: Excavation, transportation and disposal of soils contaminated with PCP and creosote.

SHORT FORM STATUS

☐ **Pre-Construction**

	Site Walk*	(Date:00/00/00)	
	Design Review*		
	Cost Proposal	(Due Date: 00/00/00)	

Post-Construction

	Demobilization	(Date: 00/00/00)
	Post Con. Submittal	(Due: 00/00/00)
	O&M	(Completion Date:

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**
	Regulatory Issue(s)		**Submittal Review**
	Analytical		**Postponement**

Modification Number Pending:

Date submitted: (00/00/00)

Amount: $

Significant Activities Performed/Associated With Item(s) Above: No field activities in May.

LUCAP signing occurred May 24, 1999 and ROD signing has been postponed until June.

Schedule Information (updates and variances): Current schedule attached which indicates slippage for anticipated ROD amendment signature prior to mobilization.

Financial Information:

Current D.O. Ceiling (w/o fee):	$	783,885.00
Total $ to Date (w/o fee)	$	519,877.00
Estimated Report Period $:	$	398.00
Forecast @ Completion:	$	633,763.00

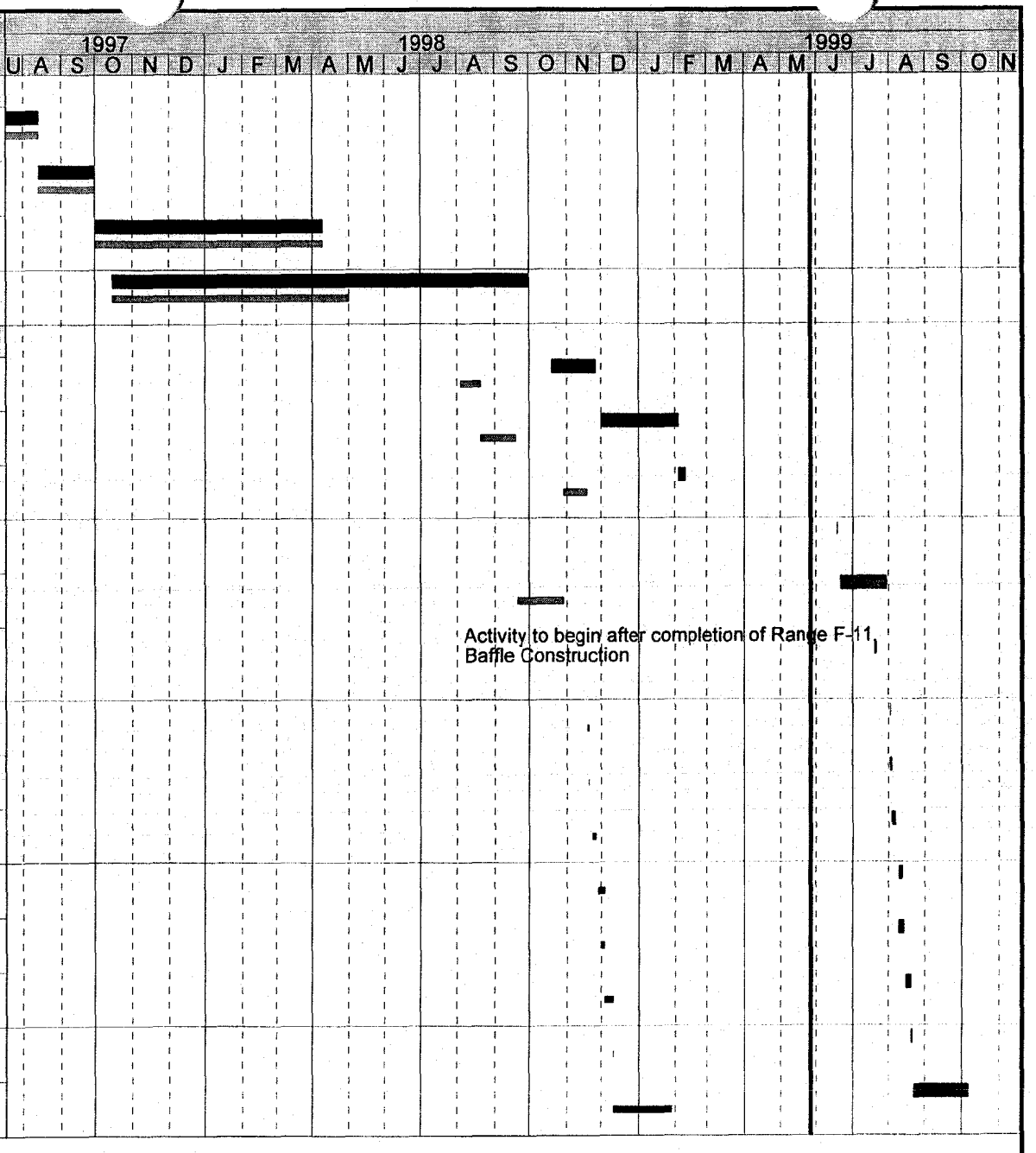
Other Information: Anticipated cost savings due to non-construction and operation of biocell.

Approved by:

John P. Franz

John P. Franz, P.E.
Program Manager

Activity ID	Activity Description	Orig Dur	%	Early Start	Early Finish
Phase I Construct Biocell					
1000	Proposal Preparation	19	100	17JUL97A	12AUG97A
1010	Negotiation & Award	13	100	13AUG97A	30SEP97A
1020	Plans Preparation	126	100	01OCT97A	08APR98A
1015	Job Hold, Awaiting LANTDIV Direction	133	100	15OCT97A	30SEP98A
Excav PAH Soils					
2000	Plans Preparation	28	100	19OCT98A	25NOV98A
2010	Plans Approval	19	100	30NOV98A	03FEB99A
2020	Plans Revision	7	100	04FEB99A	09FEB99A
2025	ROD Signing	1	0	18JUN99*	18JUN99
2030	Procurement	29	0	21JUN99	30JUL99
2035	Pre-Construction Meeting	1	0	21JUL99*	21JUL99
2040	Mobilization	1	0	02AUG99	02AUG99
2050	Clear & Site Set-Up	1	0	03AUG99	03AUG99
2060	Excavate Overburden	3	0	04AUG99	06AUG99
2070	Excav. Contaminated Soil & Transport to landfill	4	0	09AUG99	12AUG99
2080	Confirmation Sampling	4	0	10AUG99	13AUG99
2090	Backfill	4	0	16AUG99	19AUG99
2100	Site Restoration	1	0	20AUG99	20AUG99
2120	Closure Report	33	0	23AUG99	06OCT99



Project Start 17JUL97
Project Finish 06OCT99
Data Date 28MAY99
Run Date 08JUN99

Early Bar
Target Bar
Progress Bar
Critical Activity

0599

Sheet 1 of 1

OHM Remediation Services Corp.
LANTDIV Site 3 OU-12 DO # 100
Project 18319 (05/28/99 Update)

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 1* ***Date :*** *June 16,1999*

Contract Number : *N62470-93-D-3032*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *151* ***OHM Project No. :*** *19668*

(Cost Proposal - Montford Point, Camp LeJeune, NC)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

DISTRIBUTION :	***ADDRESS :***
Original to :	
COTR - Karen Wilson, Code 18311	6500 Hampton Blvd., Code 1831 LRA, Bldg. A, Rm. 2115 Norfolk, VA 23508-1297
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One Copy to: Contract Specialist: Collier, Maribeth	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Activity Point of Contact: Raines, Rick	Building 58: AC/S EMD/IR Marine Corps Base, PSC Box 20004 Camp Lejeune, NC 28542-0004
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
File (5)

MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-93-D-3032 **Delivery Order No.** 151 **Report Dates:** May 1, 1999 To May 31, 1999

Project Name: Montford Point Tower, Ranges D-29 and A-1 **Project Location:** MCB Camp Lejeune

Project No.: 919668 **Project Manager:** James A. Dunn, Jr.

Project Description: Remediate lead contaminated soils at Montford Point Water Tower and perform maintenance activities at ranges A-1 and D-29 which included excavation, screening, stabilization and re-installation of berm soils and installation of Bullet Traps at Ranges A-1 and D-29.

SHORT FORM STATUS

☐ **Pre-Construction**

	Site Walk*	(Date:00/00/00)	X	**Demobilization**	(Date: 12/15/98)
	Design Review*			**Post Con. Submittal**	(Due: 00/00/00)
	Cost Proposal	(Due Date: 00/00/00)		**O&M** (Completion	Date: 00/00/00

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**	**Modification Number Pending:**	
	Regulatory Issue(s)		**Submittal Review**	**Date submitted:**	(00/00/00)
	Analytical		**Postponement**	**Amount:**	$

Significant Activities Performed/Associated With Item(s) Above:

Awarded modification to provide three months of O & M for trap assemblies at Range D-29 during May.

Schedule Information (updates and variances): No issues – job complete. O & M will commence during June.

Financial Information:

Current D.O. Ceiling (w/o fee):	$	846,017.00
Total $ to Date (w/o fee)	$	840,286.00
Estimated Report Period $:	$	.00
Forecast @ Completion:	$	846,017.00

Other Information: The current performance report is attached.

Approved by:

John P. Franz, P.E.
Program Manager

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 1* ***Date :*** *June 16,1999*

Contract Number : *N62470-93-D-3032*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *175* ***OHM Project No. :*** *20500*

(Continue Operations at Treatment Systems)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

DISTRIBUTION :	***ADDRESS :***
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One Copy to: Contract Specialist: Collier, Maribeth	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: RPM: Reuther, Lori	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Activity Point of Contact: Hall, Nikki	Building 58: AC/S EMD/IR PSC Box 20004, MCB Camp Lejeune, NC 28542-0004
One Copy to: Activity Point of Contact: Raines, Rick	Building 58: AC/S EMD/IR Marine Corps Base, PSC Box 20004 Camp Lejeune, NC 28542-0004
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
File (5)

MONTHLY PROGRESS REPORT
CONTRACT N62470-93-D-3032
DELIVERY ORDER 0175
May 31, 1999

OPERATION AND MAINTENANCE OF TREATMENT PLANTS AND BIOCELLS, EXPANSION OF HADNOT POINT EXTRACTION SYSTEM AND MAINTENANCE OF FIELD OFFICE 3/1/98 – 2/28/99 MCB CAMP LEJEUNE, NORTH CAROLINA

OHM Project 920500
Project Manager: Jim Dunn

Approved by:

John P. Franz
Program Manager

1.0 INTRODUCTION

This Monthly Progress Report has been prepared to summarize the activities performed from May 1, 1999 to May 31, 1999, as well as a summary of the work planned for the month of June 1999 by OHM Remediation Services Corp., (OHM), on Delivery Order 0175 of the Navy-LANTDIV RAC Contract N62470-93-D-3032. This delivery order was signed on April 6, 1998.

The remediation effort consists of:

1. Expansion of the recovery well systems at the Hadnot Point North and South Plants.
2. Operation and maintenance of the Hadnot Point North and South Plants for a period of one year ending on March 31, 1999.
3. Operation and maintenance of the Lot 203 Groundwater Treatment Plant for a period of one year ending on March 31, 1999.
4. Operation and maintenance of the Air Sparging and SVE systems at AS-822, STT-69, TT-2477/78 and Berkley Manor for a period of eleven months ending March 31, 1999.
5. FY99 Site Management Plan and RAB Support.
6. Operation and maintenance of the Lot 203 Biocell for a period of one year through March 31, 1999.
7. Operation and maintenance of the Camp Geiger Biocell for a period of one year through March 31, 1999.
8. Transportation and disposal of approximately 650 tons of material from TP-457 to Carlyle Contractors for bio-treatment.

All work is to be performed in accordance with the Statement of Work and Specifications Section 01110, Rev. 1, both dated March 24, 1998.

2.0 WORK ACCOMPLISHED

During the month of May 1999, OHM has performed the following:

1. Operated and maintained the Groundwater Treatment Plant at Lot 203 for the month experiencing 46 hours of downtime due to changing the cartridge filters 13 times, cleaning of Tanks T-110 and T-220, backwashing the carbon cells and performing monthly maintenance items. Treated 11,704,500 gallons of groundwater and 3,600 gallons of water from Building 25. (See detailed operating report attached.)
2. Operated and maintained the Hadnot Point North Plant for the month experiencing 6 hours of downtime due to changing the filters 11 times, cleaning solids from the system and performing normal monthly maintenance on the plant. Treated a total of 129,981 gallons of groundwater, 1,500 gallons of produced fluids from AFVR events, 3,300 gallons of produced fluids from Jones' AFVR events and 2,000 gallons of IDW water from Site 73 (See detailed operating report attached).
3. Operated and maintained the Hadnot Point South Plant for the month experiencing a total of 46 hours of downtime due to changing the filters 12 times, cleaning the stripping tower, repairs to chemical pump and normal monthly maintenance of the plant. Treated a total of 339,971 gallons of groundwater, 50,400 gallons of Building 25 water and 21,600 gallons of produced water from SVE operations. (See detailed operating report attached).
4. Operation and maintenance of the air sparging/SVE units at BM 820 and TT 2477/78 was conducted under this D.O. (See detailed operating report attached.)

3.0 WORK PLANNED

During the month of June 1999, OHM is scheduled to perform the following:

1. Continue normal operation and maintenance of all three plant systems and the operation and maintenance of the BM 820 and TT 2477/78 air sparge/SVE systems.

4.0 PROBLEMS AND SOLUTIONS

No new issues arose during the current month and all previous problems have been satisfactorily resolved.

5.0 COST/SCHEDULE SUMMARY

Cost Summary:

The following is a summary of the costs associated with this delivery order. A detailed performance report is attached.

D.O. ceiling amount (without fee)	$ 1,271,076.00
Approximate cost through May 1999	$ 1,071,555.00
Approximate cost for May 1999	$ 64,185.00
Remaining funds	$ 199,521.00
Estimated cost to complete	$ 186,990.00
Current period estimate at complete	$ 1,258,545.00
Prior period estimate at complete	$ 1,266,920.00
Physical % complete	86.22%

Financial % complete	84.30%

Current cost at completion estimate is based upon using all funds remaining in the delivery order to continue operation and maintenance activities through July 1999.

Schedule Summary:

Original contract completion date	03/31/99
Current contract completion date	03/31/99
Prior period schedule completion date	06/30/99
Current period schedule completion date	07/31/99
Current period schedule construction completion date	04/13/99

Current period schedule completion date is based on projected availability of funding to extend O&M beyond contract completion date.

6.0 NON-COMPLIANCE CHECKOFF LIST

No non-compliance issues have been associated with this delivery order.

7.0 WASTE MATERIALS TRACKING

The free product collected during AFVR events is being stored at the treatment plant until sufficient quantity is available for cost effective recycling.

8.0 GOVERNMENT MATERIALS TRACKING

No government owned materials have been utilized on this delivery order.

9.0 MODIFICATION LOG

One modification has been issued under this delivery order for the transportation and disposal of soils located at TP-457.

10.0 WORK DIRECTIVE LOG

The current Work Directive Log is attached.

11.0 ATTACHMENTS

Performance Report (2 pages)
Current Schedule (2 pages)
Monthly Treatment Plant Report (2 pages)
Hydrocarbon Recovery (23 pages)
Work Directive Log (1 page)

LANTDIV PROGRAM
J# 920500

JOB # 920500 D.O. # 175
PERFORMANCE REPORT
ACTUAL DOLLARS AS OF MAY 1999

NOTE: ALL DOLLARS INCLUDE MARK-UPS; AWARD FEE IS NOT INCLUDED

BOLD OVERRIDE AUTOMATIC CALCULATION

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
WBS CODE	DESCRIPTION	CURRENT BUDGETED QUANTITY Thru Mod 1	QUANTITY REVISIONS/ ADJUSTMNTS	PROJECTED QUANTITY AT COMPLETION (C + D)	TASK UNIT	INSTALLED QUANTITY	TASK PERCENT COMPLETE (G / E)	CURRENT BUDGETED DOLLARS Thru Mod 1	DOLLAR REVISIONS/ ADJUSTMENTS (D x O)	PROJECTED BUDGETED DOLLARS (I + J)	EARNED DOLLARS (H x K)	ACTUAL DOLLARS TO DATE FROM PTS	CPI (M / L)	BUDGETED COST/UNIT (I / C)	ACTUAL COST/UNIT TO DATE (M / G)	ETC BASED ON ACTUAL COSTS TO DATE (see note Q)	FORECAST (BUDGET IF LESS THAN 15% COMPLETE) (M + Q)	VARIANCE FROM CURRENT BUDGET (R - I)	PERCENT OF TOTAL PROJECT (K/TOTAL K	PHYSICAL PERCENT COMPLETE (H x T)
2000000	N&S Plant Work Plans	100		100	%	100	100.0%	8,418	0	8,418	8,418	6,657	0.79	84.18	66.57	0	6,657	(1,761)	0.66%	0.66%
	North Plant																			
2011000	North Plant Site Set-up	100		100	%	100	100.0%	11,050	0	11,050	11,050	1,293	0.12	110.50	12.93	0	1,293	(9,757)	0.87%	0.87%
2012000	North Plant Well Installation	100		100	%	100	100.0%	12,134	0	12,134	12,134	20,053	1.65	121.34	200.53	0	20,053	7,918	0.95%	0.95%
2012100	North Plant Well Development	100		100	%	100	100.0%	1,878	0	1,878	1,878	0	0.00	18.78	0.00	0	0	(1,878)	0.15%	0.15%
2012200	North Plant Well Vaults & Pads	100		100	%	100	100.0%	5,003	0	5,003	5,003	631	0.13	50.03	6.31	0	631	(4,372)	0.39%	0.39%
2012300	North Plant Pumps & Instrumentation	100		100	%	100	100.0%	10,590	0	10,590	10,590	5,983	0.56	105.90	59.83	0	5,983	(4,607)	0.83%	0.83%
2012400	North Plant Well Electrical	100		100	%	100	100.0%	3,250	0	3,250	3,250	0	0.00	32.50	0.00	0	0	(3,250)	0.26%	0.26%
2012500	North Plant Well Start-up	100		100	%	100	100.0%	1,308	0	1,308	1,308	0	0.00	13.08	0.00	0	0	(1,308)	0.10%	0.10%
2013000	North Plant GW Collection Piping	100		100	%	100	100.0%	12,266	0	12,266	12,266	10,668	0.87	122.66	106.68	0	10,668	(1,597)	0.96%	0.96%
2014000	North Plant Disposal	100		100	%	16	16.0%	4,342	0	4,342	695	685	0.99	43.42	42.81	3,596	4,281	(61)	0.34%	0.05%
	South Plant																			
2021000	South Plant Site Set-up	100		100	%	100	100.0%	8,910	0	8,910	8,910	1,684	0.19	89.10	16.84	0	1,684	(7,226)	0.70%	0.70%
2022000	South Plant Well Installation	100		100	%	100	100.0%	16,007	0	16,007	16,007	46,966	2.93	160.07	469.66	0	46,966	30,958	1.26%	1.26%
2022100	South Plant Well Development	100		100	%	100	100.0%	2,781	0	2,781	2,781	0	0.00	27.81	0.00	0	0	(2,781)	0.22%	0.22%
2022200	South Plant Well Vaults & Pads	100		100	%	100	100.0%	7,504	0	7,504	7,504	7,665	1.02	75.04	76.65	0	7,665	161	0.59%	0.59%
2022300	South Plant Pumps & Instrumentation	100		100	%	100	100.0%	15,699	0	15,699	15,699	11,275	0.72	156.99	112.75	0	11,275	(4,424)	1.24%	1.24%
2022400	South Plant Well Electrical	100		100	%	100	100.0%	3,250	0	3,250	3,250	0	0.00	32.50	0.00	0	0	(3,250)	0.26%	0.26%
2022500	South Plant Well Start-up	100		100	%	100	100.0%	1,332	0	1,332	1,332	0	0.00	13.32	0.00	0	0	(1,332)	0.10%	0.10%
2023000	South Plant GW Piping	100		100	%	100	100.0%	59,250	0	59,250	59,250	0	0.00	592.50	0.00	0	0	(59,250)	4.66%	4.66%
2050000	N&S Plant Final Report	100		100	%	0	0.0%	1,619	0	1,619	0	59	N/A	16.19	N/A	1,560	1,619	0	0.13%	0.00%
	O&M N&S Plants																			
2030000	O&M of North & South Plants	100		100	%	85	85.0%	63,437	0	63,437	53,921	75,543	1.40	634.37	888.74	13,000	88,543	25,107	4.99%	4.24%
2040000	N & S Plant Sampling & Analysis	100		100	%	85	85.0%	29,882	0	29,882	25,399	66,898	2.63	298.82	787.03	13,000	79,898	50,016	2.35%	2.00%
	O&M Lot 203 GWTP																			
2120000	Lot 203 GWTP Sampling & Analysis	100		100	%	85	85.0%	25,493	0	25,493	21,669	2,670	0.12	254.93	31.41	10,000	12,670	(12,823)	2.01%	1.70%
2130000	Lot 203 O&M	100		100	%	85	85.0%	118,229	0	118,229	100,495	152,459	1.52	1,182.29	1,793.63	20,000	172,459	54,230	9.30%	7.91%

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
WBS CODE	DESCRIPTION	CURRENT BUDGETED QUANTITY	QUANTITY REVISIONS/ ADJUSTMNTS	PROJECTED QUANTITY AT COMPLETION	TASK UNIT	INSTALLED QUANTITY	TASK PERCENT COMPLETE	CURRENT BUDGETED DOLLARS	DOLLAR REVISIONS/ ADJUSTMENTS	PROJECTED BUDGETED DOLLARS	EARNED DOLLARS	ACTUAL DOLLARS TO DATE	CPI	BUDGETED COST/UNIT	ACTUAL COST/UNIT TO DATE	ETC BASED ON ACTUAL COSTS TO DATE	FORECAST (BUDGET IF LESS THAN 15% COMPLETE)	VARIANCE FROM CURRENT BUDGET	PERCENT OF TOTAL PROJECT	PHYSICAL PERCENT COMPLETE
		Thru Mod 1		(C + D)			(G / E)	Thru Mod 1	(D x O)	(I + J)	(H x K)	FROM PTS	(M / L)	(I / C)	(M / G)	(see note Q)	(M + Q)	(R - I)	(K/TOTAL K	(H x T)
	O&M Biocells																			
2230000	O&M Lot 203 Biocell	100		100	%	100	100.0%	60,645	0	60,645	60,645	1,055	0.02	606.45	10.55	0	1,055	(59,590)	4.77%	4.77%
2239000	Lot 203 Biocell Batch Load Out	100		100	%	100	100.0%	7,697	0	7,697	7,697	5,171	0.67	76.97	51.71	0	5,171	(2,526)	0.61%	0.61%
2240000	O&M Camp Geiger Biocell	100		100	%	100	100.0%	32,057	0	32,057	32,057	1,252	0.04	320.57	12.52	0	1,252	(30,805)	2.52%	2.52%
2249000	Camp Geiger Biocell Batch Load Out	100		100	%	0	0.0%	5,014	0	5,014	0	0	N/A	50.14	N/A	5,014	5,014	0	0.39%	0.00%
	Corrective Actions																			
2300000	Corrective Actions	100		100	%	66	66.0%	81,302	0	81,302	53,659	53,183	0.99	813.02	805.80	20,000	73,183	(8,119)	6.40%	4.22%
	O&M SVE/Air Sparge Systems																			
2400000	O&M Site 820	100		100	%	85	85.0%	152,162	0	152,162	129,338	72,309	0.56	1,521.62	850.69	15,000	87,309	(64,853)	11.97%	10.18%
2410000	Site 820 Carbon Demob	100		100	%	0	0.0%	3,557	0	3,557	0	0	N/A	35.57	N/A	3,557	3,557	0	0.28%	0.00%
2500000	O&M Site 822	100		100	%	85	85.0%	5,173	0	5,173	4,397	11,518	2.62	51.73	135.51	500	12,018	6,845	0.41%	0.35%
2600000	O&M Site 69	100		100	%	85	85.0%	4,324	0	4,324	3,676	4,353	1.18	43.24	51.21	500	4,853	528	0.34%	0.29%
2700000	O&M Site 2477/78	100	0	100	%	85	85.0%	91,473	0	91,473	77,752	56,403	0.73	914.73	663.57	9,500	65,903	(25,569)	7.20%	6.12%
2710000	Site 2477/78 Carbon Demob	100		100	%	0	0.0%	3,557	0	3,557	0	2,699	N/A	35.57	N/A	858	3,557	0	0.28%	0.00%
3000000	Load Soils @ TP457	100		100	%	100	100.0%	28,476	0	28,476	28,476	20,355	0.71	284.76	203.55	0	20,355	(8,122)	2.24%	2.24%
	Administration & Support																			
9900010	Administration & Support	100		100	%	85	85.0%	371,103	0	371,103	315,438	432,068	1.37	3,711.03	5,083.16	70,000	502,068	130,965	29.20%	24.82%
9900200	Site Management Plan	100		100	%	0	0.0%	905	0	905	0	0	N/A	9.05	N/A	905	905	0	0.07%	0.00%
	TOTAL PROJECT COSTS							1,271,076	0	1,271,076	1,095,942	1,071,555	0.98			188,990	1,258,545	(12,530)	100.00%	86.22%

NOTES: Note Q: Calculation of ETC is "@IF(G25=0,K25-M25,@IF(H25>0.15,(E25-G25)*P25,@IF(M25<K25,K25-M25,(E25-G25)*P25)))"

1)

2)

3)

4)

5)

FINANCIAL PERCENT COMPLETE (M / I) 84.30%
(of Current Budgeted Dollars)

VARIANCE ANALYSIS:

1) Existing funding will allow O & M of all systems through June 30, 1999

2)

3)

4)

5)

6)

7)

8)

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
D.O. 175 (20500) - Treatment Systems				
Premobilization Activities				
A5STD0060	Award Date	1	06APR98A	06APR98A
A5STD0070	Submit Preliminary Plans	20	13JUL98A	07AUG98A
A520000000	N & S Work Plans	40*	13JUL98A	04SEP98A
A5STD0080	Navy Approve Preliminary Plans	18*	10AUG98A	02SEP98A
A5STD0090	OHM Submit Final Plans	2	03SEP98A	04SEP98A
A5STD0135	*Preconstruction Meeting*	1	09SEP98A	09SEP98A
Mobilization / Site Setup				
A5STD0140	Mobilization for Construction	1	05JAN99A	05JAN99A
North Plant				
A520120000	North Plant Well Drilling	2	09NOV98A	10NOV98A
A520121000	North Plant Well Development	1	11NOV98A	11NOV98A
A520110000	North Plant Site Setup	1	18JAN99A	19JAN99A
A520122000	North Plant Well Vaults & Pad	2	20JAN99A	21JAN99A
A520130000	North Plan GW Collection Piping	10	21JAN99A	03FEB99A
A520123000	North Plant Pumps & Instrumentation	3	04FEB99A	08FEB99A
A520124000	North Plant Well Electrical	1	09FEB99A	09FEB99A
A520125000	North Plant Well Start Up	1	10FEB99A	10FEB99A
A520140000	North Plant Disposal	1	11FEB99A	11FEB99A
South Plant				
A520220000	South Plant Well Drilling	3	12NOV98A	16NOV98A
A520221000	South Plant Well Development	2	17NOV98A	18NOV98A
A520210000	South Plant Site set up	1	12FEB99A	12FEB99A
A520222000	South Plant Well Vaults & Pads	3	15FEB99A	17FEB99A

1999: MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

2000: JAN FEB MAR APR MAY JUN J

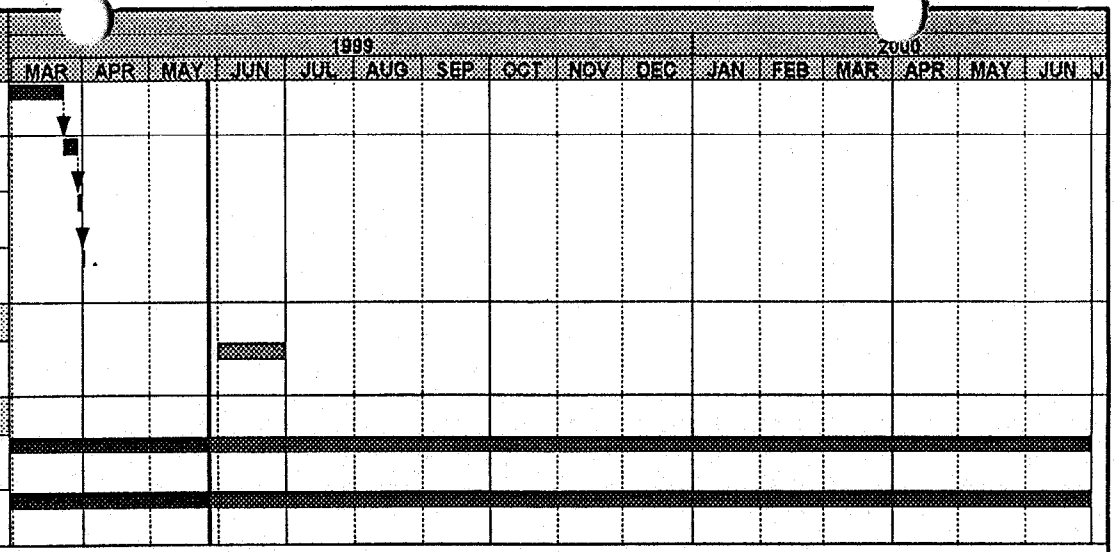
Project Start 02FEB98
Project Finish 30JUN00
Data Date 28MAY99
Run Date 08JUN99

Early Bar
Progress Bar
Critical Activity

175H

IT/OHM Remediation
MCB Camp Lejeune, NC Master Project
D.O. 175 Extraction Well OU1 Site 78

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
A520230000	South Plant GW Collection Piping	32*	18FEB99A	23MAR99A
A520223000	South Plant Pumps & Instrumentation	5	24MAR99A	30MAR99A
A520224000	South Plant Well Electrical	1	31MAR99A	31MAR99A
A520225000	South Plant Well Start Up	1	01APR99A	01APR99A
Demobilization / Clean-up				
A520500000	N & S Final Construction Report	22	01JUN99	30JUN99
Operations & Maintenance				
A520300000	N & S Plants O & M	700*	01AUG98A	30JUN00
A520400000	N & S Sampling & Analysis	700*	01AUG98A	30JUN00



Project Start	02FEB98
Project Finish	30JUN00
Data Date	28MAY99
Run Date	08JUN99

Early Bar
Progress Bar
Critical Activity

175H

IT/OHM Remediation
MCB Camp Lejeune, NC Master Project
D.O. 175 Extraction Well OU1 Site 78

Work Directive Log

6/9/99
Impacts

Operation and Maintenance of Treatment Plants and Biocells

Delivery Order: 175

Project Number: 920500

Costs are a Rough Order of Magnitude (ROM). It is not actual cost, nor is it a final change request value.

Work Directive Number	Change Type	Date of Request	Date of Approval	Status	Critical Approval Date	Description of Work	Estimated Duration of Task	Schedule Extension (Y / N)	Estimated Cost (ROM)
1	SG			A	N/A			N	
2	SG			A	N/A			N	
3	SG			A	N/A			N	
4	SG			A	N/A			N	
5	SG	9/4/98		A	N/A	Year 2000 Compliance	1	N	$1,500
6	SG	11/24/98		A	N/A	Baker Purge Water Disposal	1	N	$0
7	SG	11/19/98		A	N/A	Drums from Lot 201	7	N	$5,000
8	SG	12/9/98		A	N/A	Biocell Candidate Soils Evaluations	120	N	$10,000
9	SG	12/9/98		A	N/A	Baker IDW - Site 35	2	N	$500
10	SG	1/7/99		A	N/A	Communications Improvements	30	N	$6,000
11	SG	1/13/99			N/A	Jones AFVR Fluids	120	N	$5,720
12	SG	2/4/99			N/A	Annual Maintenance for Plants	30	N	$35,000
								Total	$63,720

Change Type:
TD - Technical Directive
SG - Scope Growth
SR - Scope R[illegible]ion

Status:
A - Approved
P - Pending
R - Rejected
W - Withdrawn

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 1

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
10/28/97	14:15							
10/29/97	8:20	2.2	12	415	0.063	2.4	0.1	
10/30/97	10:10	10	45	457	0.238	9.7	2.1	
10/30/97	13:49	13	31	457	0.167	6.8	3.1	
11/04/97	11:10	13	7	369	0.038	1.3	3.1	
11/05/97	17:30	21	5	416	0.027	1.0	3.5	
11/06/97	10:18	38		449			3.8	
11/07/97	10:11	40	35	447	0.186	7.5	4.1	
11/11/97	10:20	88	214	362	1.140	36.9	48.5	
11/14/97	14:30	120	64	305	0.342	9.4	79.3	
11/15/97	8:30	137	19	306	0.100	2.7	83.6	
11/28/97	14:30	192	10		0.052		86.7	
12/18/97	9:15	399		380			86.7	
01/05/98	15:00	602		303			86.7	
01/12/98	13:00	684		279			86.7	
01/21/98	14:00	792		249			86.7	
01/27/98	11:00	833	12	259	0.064	1.5	88.0	
02/02/98	16:00	840		246			88.2	
02/11/98	14:00	918		130			88.2	
02/21/98	8:00	941	6	286	0.032	0.8	88.6	
02/24/98	10:00	959	10	202	0.052	0.9	89.2	
03/03/98	9:00	1046	2	230	0.013	0.3	91.4	
03/14/98	9:00	1156	6	140	0.029	0.4	92.9	
03/26/98	9:45	1223		140			93.4	
04/08/98	15:30	1318	2	195	0.010	0.2	93.7	
04/13/98	13:45	1320	4	196	0.019	0.3	93.7	
04/23/98	10:15	1447	1	195	0.005	0.1	94.9	
04/29/98	12:20	1512	25	194	0.133	2.3	98.1	
05/06/98	12:15	1578	10		0.053		101.3	
05/19/98	10:00	1595	10	138	0.053	0.7	101.5	
06/29/98	12:30	1917	434		2.308		105.9	
07/09/98	11:15	2048	303	281	1.611	40.5	216.4	
07/13/98	12:30	2086	82	316	0.436	12.3	258.2	

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 1

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
07/22/98	12:00	2170	123	317	0.654	18.5	312.2	
08/03/98	13:45	2230	320	403	1.702	61.4	412.1	
08/21/98	16:45	2356	345	401	1.835	65.9	746.1	
09/03/98	13:30	2413	378	402	2.010	72.3	910.1	
09/12/98	7:30	2439	1596	538	8.487	408.7	1170.7	
09/16/98	12:40	2447	1	400	0.003	0.1	1238.8	
09/24/98	11:00						1233.9	water in line, in repair
10/07/98	N/A						1233.9	water in line, in repair
10/14/98	N/A						1233.9	water in line, in repair
10/21/98	14:05	2675		658			1233.9	water in line, in repair
10/22/98	9:05	2694					1233.9	water in line, in repair
10/27/98	8:21	2755		731			1233.9	water in line, in repair
11/14/98	7:42	2856		801			1233.9	
11/19/98	10:15	2910		817			1233.9	
01/07/99	9:40	3184	0	907	0.002	0.1	1234.7	
01/12/99	9:10	3247	14	752	0.074	5.0	1241.4	
01/21/99	10:05	3440	14	917	0.072	5.9	1285.3	
01/26/99	8:35	3559	2	781	0.011	0.7	1301.7	
02/05/99	9:30	3802	4	1105	0.021	2.1	1316.2	
02/12/99	10:00	3967		781			1323.4	
02/17/99	13:00	4076		769			1323.4	
02/22/99	9:45	4191	13	982	0.070	6.1	1338.1	System down for sampling

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 1

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/03/99	10:00	4287	17	893	0.090	7.2	1364.7	
03/12/99	8:30	4511	6	1084	0.032	3.1	1412.9	
03/17/99	13:00	4632	5	902	0.027	2.1	1426.1	
03/29/99	11:00	4816	6	908	0.031	2.5	1444.1	
04/08/99	12:00	5033	22	444	0.117	4.6	1476.7	
04/15/99	9:00	5200	15	1187	0.080	8.5	1522.3	
04/21/99	8:00	5342	7	1200	0.037	4.0	1559.2	
05/05/99	11:00	5563	5	507	0.027	1.2	1583.2	
05/10/99	7:30						1443.3	System down, heat exchanger repairs
05/21/99	8:30	5701	7	507	0.037	1.7	1644.0	
05/28/99	9:30	5870	3	918	0.016	1.3	1654.6	
05/31/99	9:30	5942	3	918	0.016	1.3	1658.5	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = K \times Sqrt((P_{std}-P) \times dP \times (T_{std}/(T+460)))$

Q: vapor flowrate (SCFM)

K: pipe constant

dP: manometer differential pressure (in w.c.)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

$K_{6\text{-inch}}$ = 93 (SVE Field #1)

$K_{4\text{-inch}}$ = 42 (SVE Field #2)

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / SVE system
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 2

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)		Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
10/28/97	14:15								
10/29/97	8:20	2.2	1709		367	9.088	298.2	13.7	
10/30/97	10:10	10	1252		415	6.658	247.2	102.3	
10/30/97	13:49	13	121		415	0.645	23.9	119.2	
11/04/97	11:10	13	4446		395	23.643	836.4	119.2	
11/05/97	17:30	21	2360		378	12.550	424.8	329.5	
11/06/97	10:18	38	687		394	3.652	128.9	525.6	
11/07/97	10:11	40	526		393	2.797	98.5	535.0	
11/11/97	10:20	88	6384		363	33.949	1104.5	1738.0	
11/14/97	14:30	120	2739		224	14.566	292.0	2669.0	
11/15/97	8:30	137	758		224	4.029	80.8	2801.0	
11/28/97	14:30	192	479			2.546		2893.5	
12/18/97	9:15	399	358		309	1.903	52.6	3120.4	
01/05/98	15:00	602			250			3342.9	
01/12/98	13:00	684	49		229	0.260	5.3	3352.0	
01/21/98	14:00	792	344		206	1.829	33.7	3439.7	
01/27/98	11:00	833	723		117	3.845	40.3	3502.9	
02/02/98	16:00	840	665		157	3.536	49.7	3530.9	
02/11/98	14:00	918	990		145	5.265	68.2	3722.6	
02/21/98	8:00	941	361		144	1.920	24.8	3767.2	
02/24/98	10:00	959			87			3776.5	
03/03/98	9:00	1046	2		60	0.011	0.1	3776.6	
03/14/98	9:00	1156	8		109	0.044	0.4	3777.7	
03/26/98	9:45	1223	2101		64	11.173	63.6	3867.1	dp estimated, water in line
04/08/98	15:30	1318	1800	*	88	9.572	75.3	4142.0	dp estimated, water in line, temp & FID estimated
04/13/98	13:45	1320	1500	*	89	7.977	63.3	4147.8	dp estimated, water in line, temp & FID estimated
04/23/98	10:15	1447	1200	*	88	6.381	50.2	4448.1	dp estimated, water in line, temp & FID estimated
04/29/98	12:20	1512	2542		88	13.518	106.1	4659.7	dp estimated, water in line, temp & FID estimated
05/06/98	12:15	1578	2503			13.311		4805.6	
05/19/98	10:00	1595	2000		139	10.636	132.6	4852.5	
06/29/98	12:30	1917	852			4.531		5742.0	
07/09/98	11:15	2048	1029		113	5.472	55.2	5892.6	
07/13/98	12:30	2086	1355		145	7.206	93.4	6010.3	
07/22/98	12:00	2170	1004		144	5.339	68.7	6294.1	
08/03/98	13:45	2230	409		158	2.175	30.7	6418.4	
08/21/98	16:45	2356	456		169	2.425	36.7	6595.6	

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / SVE system
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 2

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
09/03/98	13:30	2413	489	169	2.600	39.4	6686.0	
09/12/98	7:30	2439	4034		21.452		6707.3	Field #2 Water in line
09/16/98	12:40	2447	0	64	0.002	0.0	6707.3	
09/24/98	11:00						6706.8	water in line, in repair
10/07/98	N/A						6706.8	water in line, in repair
10/14/98	N/A						6706.8	water in line, in repair
10/21/98	14:05	2675	116	222	0.617	12.3	7389.7	water in line, in repair
10/22/98	9:05	2694	209	222	1.111	22.1	7403.3	water in line, in repair
10/27/98	8:21	2755	251	256	1.335	30.6	7470.3	water in line, in repair
11/14/98	7:42	2856	382	328	2.031	59.6	7660.0	
11/19/98	10:15	2910	125	368	0.665	21.9	7751.7	
01/07/99	9:40	3184	68	386	0.362	12.5	7947.9	
01/12/99	9:10	3247	68	317	0.359	10.2	7977.7	
01/21/99	10:05	3440	109	261	0.580	13.5	8072.9	
01/26/99	8:35	3559	198	301	1.053	28.4	8176.9	
02/05/99	9:30	3802	127	206	0.675	12.4	8383.6	
02/12/99	10:00	3967	81	265	0.432	10.2	8461.6	water in line
02/17/99	13:00	4076	58	309	0.309	8.6	8504.3	
02/22/99	9:45	4191	98	253	0.523	11.8	8553.1	System down for sampling
03/03/99	10:00	4287	86	287	0.457	11.8	8600.4	
03/12/99	8:30	4511	75	330	0.399	11.8	8710.2	
03/17/99	13:00	4632	348	303	1.851	50.1	8866.3	
03/29/99	11:00	4816	1156	281	6.147	154.5	9650.5	Water in Line
04/08/99	12:00	5033	82	285	0.436	11.1	10399.1	
04/15/99	9:00	5200	32	286	0.170	4.3	10452.9	
04/21/99	8:00	5342	34	286	0.181	4.6	10479.4	
05/05/99	11:00	5563	35	90	0.186	1.5	10507.7	
05/10/99	7:30						10333.0	System down, heat exchanger repairs
05/21/99	8:30	5701	38	63	0.202	1.1	10469.2	
05/28/99	9:30	5870	25	352	0.133	4.2	10488.0	
05/31/99	9:30	5942	25	352	0.133	4.2	10500.6	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$ reading (PPM)

$Q = K \times Sqrt((P_{std}-P) \times dP \times (T_{std}/(T+46$ * = Estimated value

Q: vapor flowrate (SCFM)

$M = Q \times C \times 0.0895$

K: pipe constant

M: hydrocarbon recovery rate (lb/day)

dP: manometer differential pressure

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / SVE system
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 2

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream

T_{std}: standard temperature (528 degree

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

$K_{6\text{-inch}}$ = 93 (SVE Field #1)

$K_{4\text{-inch}}$ = 42 (SVE Field #2)

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 3

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
11/05/97	17:00		207	351	1.101	34.6		
11/06/97	14:25	14	186	365	0.989	32.3	19.5	
11/09/97	8:30	45	176	339	0.936	28.4	58.7	
11/11/97	9:00	94	571	342	3.036	92.8	182.5	
11/16/97	14:00	120	1120	373	5.956	198.7	340.4	
11/19/97	9:00	164	328	217	1.746	34.0	553.7	
12/01/97	9:30	225	396	323	2.106	60.9	674.3	
12/17/97	9:00	357	32	324	0.170	4.9	855.4	
01/06/98	15:10	591	37	250	0.195	4.4	900.8	
01/12/98	14:00	672		272			908.2	
01/21/98	15:30	780		295			908.2	
01/26/98	13:00	812	26	253	0.138	3.1	910.2	
02/02/98	17:00	838		262			911.9	
02/11/98	15:00	927		568			911.9	
02/20/98	8:30	972	17	635	0.090	5.1	916.8	
02/24/98	9:00	1030	22	638	0.117	6.7	931.0	
03/05/98	8:00	1121		142			943.7	
03/15/98	7:30	1250	25	137	0.132	1.6	948.1	
03/26/98	2:00	1268	140	141	0.743	9.4	952.2	dp estimated due to water in line
04/08/98	11:30	1297	23	136	0.121	1.5	958.7	taken, estimated
04/13/98	11:15	1318		141			959.4	taken, estimated
04/23/98	13:00	1552	35	138	0.186	2.3	970.6	taken, estimated
04/29/98	8:45	1631	7	138	0.037	0.5	975.1	taken, estimated
05/06/98	9:30	1700	7	140	0.037	0.5	976.4	
05/19/98	12:00	1705	24	138	0.128	1.6	976.6	
06/05/98	11:45	1795	4	137	0.021	0.3	980.1	Field 4: water in line
06/12/98	11:30	1837	5	135	0.027	0.3	980.6	Field 4: water in line

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 3

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
06/18/98	15:45	1871	25	97	0.133	1.2	981.6	Field 4: water in line
06/26/98	10:00	1943	10	141	0.053	0.7	984.4	
06/29/98	10:00	1962	700	101	0.053	0.5	984.8	
07/09/98	15:45	2075	1500	141	0.043	0.5	987.2	
07/13/98	9:45	2128	900		0.043		987.8	
07/22/98	9:30	2160	1000	287	0.037	1.0	988.5	
08/03/98	11:15	2303	1500	143	0.048	0.6	993.1	
08/21/98	12:30	2393	300	315	0.096	2.7	999.3	Field 4: water in line
09/03/98	9:00	2431	300	375	0.117	3.9	1004.6	Field 4: water in line
09/12/98	10:45	2477			0.003		1008.3	Field 3: water in line
09/16/98	15:10	2517	1000		0.011		1008.3	
09/24/98	11:00	2671		636	0.558	31.8	1110.4	Field #3 & 4, Water in line
10/07/98	10:44	2719					1142.2	Field #3 & 4, Water in line
10/14/98	8:50	2794	1300	326			1142.2	water in lines
10/21/98	8:45	2798	2000	296			1142.2	Field #4:water in line
10/27/98	13:00	2863	2500	328	0.101	3.0	1146.2	Field #4:water in line
11/14/98	9:21	2958	2100	380	0.394	13.4	1178.5	Field #4, water in line
11/19/98	14:00	3027	2800	207			1197.8	Field #4, water in line
12/05/98	14:00	3411	2800	207			1197.8	
01/07/99	13:05	3301	2500	330	0.370	10.9	1172.8	
01/12/99	13:15	3358	2600	330	0.308	9.1	1196.6	
01/21/99	13:00	3572	2500	209	0.747	14.0	1299.6	
01/26/99	12:05	3692	2300	212	0.242	4.6	1346.1	
02/05/99	9:30	3933	1700	352	0.069	2.2	1380.1	Field #4 ,water in line
02/13/99	13:30	4097		374			1387.5	Field #4, water in line
02/17/99	13:00	4206	4000	347	0.002	0.1	1387.7	Field #4, water in line
02/22/99	9:45	4322	1900	324	0.049	1.4	1391.3	Field #4 ,water in line

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 3

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/03/99	10:00	4426	4000	284	0.074	1.9	1398.5	Field #4, water in line
03/12/99	8:30	4638	1700	203	0.043	0.8	1410.3	
03/17/99	13:00	4763	6000	510	0.043	1.9	1417.3	
03/29/99	11:00	4946		462	0.117	4.8	1443.2	Water in Line
04/08/99	12:00	5163	1700	445	0.112	4.4	1485.2	
04/15/99	9:00	5330	2200	446	0.069	2.8	1510.3	
04/21/99	8:00	5472	2400	448	0.032	1.3	1522.2	
05/05/99	11:00	5693	3300		0.037		1528.1	
05/10/99	7:30						1528.1	System down, heat exchanger
05/21/99	8:30	5832	3600		0.053		1528.1	
05/28/99	9:30	6000	3300	398	0.043	1.5	1533.4	
05/31/99	9:30	6000	3300	398	0.043	1.5	1533.4	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = K \times Sqrt((P_{std}-P) \times dP \times (T_{std}/(T+460)))$

Q: vapor flowrate (SCFM)

K: pipe constant

dP: manometer differential pressure (in w.c.)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

$K_{6\text{-inch}}$ = 93 (SVE Field #1)

$K_{4\text{-inch}}$ = 42 (SVE Field #2)

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 4

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
11/05/97	17:00		350	315	1.861	52.5		
11/06/97	14:25	14		327			15.3	
11/09/97	8:30	45	536	305	2.850	77.7	65.5	
11/11/97	9:00	94	854	305	4.541	123.8	271.2	
11/16/97	14:00	120	431	333	2.290	68.3	375.2	
11/19/97	9:00	164	160	228	1.994	40.7	475.1	
12/01/97	9:30	225	183	202	1.329	24.0	557.3	
12/17/97	9:00	357	59	202	0.313	5.7	638.9	
01/06/98	15:10	591	80	249	0.423	9.4	712.4	
01/12/98	14:00	672	42	142	0.221	2.8	733.0	
01/21/98	15:30	780	59	317	0.314	8.9	759.4	
01/26/98	13:00	812	174	180	0.925	14.9	775.3	
02/02/98	17:00	838	231	114	1.228	12.5	790.1	
02/11/98	15:00	927	535	255	2.845	65.0	933.8	
02/20/98	8:30	972	152	360	0.808	26.1	1019.1	
02/24/98	9:00	1030	397	362	2.111	68.5	1133.4	
03/05/98	8:00	1121	44	255	0.234	5.3	1273.3	
03/15/98	7:30	1250	881	247	4.683	103.7	1566.5	
03/26/98	2:00	1268	229	251	1.219	27.4	1615.7	dp estimated due to water in line
04/08/98	11:30	1297		244			1632.2	dp estimated, no field 4 FID taken, estimated
04/13/98	11:15	1318		253			1632.2	dp estimated, no field 4 FID taken, estimated
04/23/98	13:00	1552		247			1632.2	dp estimated, no field 4 FID taken, estimated
04/29/98	8:45	1631		248			1632.2	dp estimated, no field 4 FID taken, estimated
05/06/98	9:30	1700	180	251	0.957	21.5	1663.1	
05/19/98	12:00	1705	180	247	0.957	21.2	1667.6	
06/05/98	11:45	1795		246			1707.2	Field 4: water in line
06/12/98	11:30	1837		242			1707.2	Field 4: water in line
06/18/98	15:45	1871		245			1707.2	Field 4: water in line
06/26/98	10:00	1943	7	253	0.037	0.8	1708.5	
06/29/98	10:00	1962	8		0.043		1708.8	
07/09/98	15:45	2075	6		0.032		1708.8	
07/13/98	9:45	2128	7		0.037		1708.8	
07/22/98	9:30	2160	7		0.037		1708.8	
08/03/98	11:15	2303	7		0.037		1708.8	

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 4

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
08/21/98	12:30	2393					1708.8	Field 4: water in line
09/03/98	9:00	2431					1708.8	Field 4: water in line
09/12/98	10:45	2477		256			1708.8	Field 3: water in line
09/16/98	15:10	2517	1	248	0.005	0.1	1708.9	
09/24/98	11:00	2671	63	355	0.335	10.7	1743.5	Field #3 & 4, Water in line
10/07/98	10:44	2719					1754.1	Field #3 & 4, Water in line
10/14/98	8:50	2794		262			1754.1	water in lines
10/21/98	8:45	2798		283			1754.1	Field #4:water in line
10/27/98	13:00	2863		837			1754.1	Field #4:water in line
11/14/98	9:21	2958	21	256	0.112	2.6	1759.2	Field #4, water in line
11/19/98	14:00	3027		254			1762.9	Field #4, water in line
12/05/98	14:00	3411		254			1762.9	
01/07/99	13:05	3301	18	374	0.096	3.2	1755.5	
01/12/99	13:15	3358	19		0.101		1759.3	
01/21/99	13:00	3572	61	264	0.324	7.7	1793.6	
01/26/99	12:05	3692	50	269	0.266	6.4	1828.8	
02/05/99	9:30	3933					1860.9	Field #4 ,water in line
02/13/99	13:30	4097		350			1860.9	Field #4, water in line
02/17/99	13:00	4206	2	252	0.011	0.2	1861.5	Field #4, water in line
02/22/99	9:45	4322	9	362	0.045	1.5	1865.6	Field #4 ,water in line

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
AS/SVE Field 4

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/03/99	10:00	4426	12		0.064		1868.8	Field #4, water in line
03/12/99	8:30	4638	7	564	0.037	1.9	1877.1	
03/17/99	13:00	4763	6		0.032		1882.0	
03/29/99	11:00	4946	36	252	0.191	4.3	1898.4	Water in Line
04/08/99	12:00	5163	16		0.085		1918.0	
04/15/99	9:00	5330	9	356	0.048	1.5	1923.3	Water in Line
04/21/99	8:00	5472	5		0.027		1927.8	Water in Line
05/05/99	11:00	5693	7	250	0.037	0.8	1931.6	
05/10/99	7:30						1833.0	System down, heat exchanger
05/21/99	8:30	5832	12	349	0.064	2.0	2075.2	
05/28/99	9:30	6000	6	253	0.032	0.7	2084.7	
05/31/99	9:30	6000	6	253	0.032	0.7	2084.7	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = K \times Sqrt((P_{std}-P) \times dP \times (T_{std}/(T+460)))$

Q: vapor flowrate (SCFM)

K: pipe constant

dP: manometer differential pressure (in w.c.)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

$K_{6\text{-inch}} = 93$ (SVE Field #1)

$K_{4\text{-inch}} = 42$ (SVE Field #2)

Cumulative Mass of Volatile Hydrocarbons Discharged
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
10/28/97	14:15				29.92	520					
10/29/97	8:20	2	38	4776	29.92	588	2330	0.202	42.1	1.9	AS/SVE Fields 1&2
10/30/97	10:10	9 *	148	4026	29.92	606	1906	0.787	134.3	26.9	AS/SVE Fields 1&2
10/30/97	13:49	10 *	139	3730	29.92	520	2058	0.739	136.1	31.5	AS/SVE Fields 1&2
11/04/97	11:10	15 *	76.2	4093	29.92	522	2250	0.405	81.6	55.0	AS/SVE Fields 1&2
11/05/97	17:30	31	123	4659	29.92	541	2471	0.654	144.6	130.4	AS/SVE Fields 1&2
11/06/97	14:25	49	73	4218	29.92	532	2274	0.388	79.0	214.7	AS/SVE Fields 3&4
11/09/97	8:30	115	77	4802	29.92	522	2637	0.409	96.6	456.6	AS/SVE Fields 3&4
11/11/97	9:00	164	59.9	4837	29.92	530	2618	0.319	74.6	629.6	AS/SVE Fields 3&4
11/11/97	10:20	165	84.3	4697	29.92	532	2533	0.448	101.6	634.5	AS/SVE Fields 1&2
11/14/97	14:30	232	103.4	5286	29.92	536	2831	0.550	139.3	970.8	AS/SVE Fields 1&2
11/15/97	8:30	249	63.7	4882	29.92	524	2672	0.339	81.0	1048.9	AS/SVE Fields 1&2
11/16/97	14:00	278	59.9	4597	29.92	527	2504	0.319	71.4	1140.9	AS/SVE Fields 3&4
11/28/97	14:30	400	90.8	5900	29.92	546	3104	0.483	134.2	1663.3	AS/SVE Fields 1&2
12/01/97	9:30	467	46.7	4700	29.92	534	2526	0.248	56.1	1929.0	AS/SVE Fields 3&4
12/17/97	9:00	736		4100	29.92	534	2206			2243.6	AS/SVE Fields 3&4
12/18/97	9:15	760	13.2	1700	29.92	526	928	0.070	5.8	2246.5	AS/SVE Fields 1&2
01/05/98	15:00	1192		3700	29.92	544	1953			2299.0	AS/SVE Fields 1&2
01/06/98	15:10	1215	5.3	3300	29.92	549	1726	0.028	4.4	2301.1	AS/SVE Fields 3&4
01/12/98	13:00	1357		5800	29.92	538	3095			2314.0	AS/SVE Fields 1&2
01/12/98	14:00	1358		5500	29.92	537	2941			2314.0	AS/SVE Fields 3&4
01/21/98	14:00	1572		5100	29.92	529	2768			2314.0	AS/SVE Fields 3&4
01/26/98	13:00	1612		5400	29.92	536	2893			2314.0	AS/SVE Fields 3&4
02/02/98	17:00	1679		4500	29.92	539	2397			2314.0	AS/SVE Fields 3&4
02/11/98	14:00	1845		4500	29.92	543	2379			2314.0	AS/SVE Fields 3&4
02/20/98	8:30	1911	0.1	2200	29.92	542	1165	0.001	0.1	2314.1	AS/SVE Fields 3&4
02/24/98	11:00	1987	1	6000	29.92	539	3196	0.005	1.5	2316.6	AS/SVE Fields 3&4
03/03/98	9:00	2144		4500	29.92	528	2447			2321.5	AS/SVE Fields 3&4
03/15/98	7:30	2407	20.4	2600	29.92	544	1372	0.108	13.3	2394.5	AS/SVE Fields 3&4
03/26/98	9:45	2488		1700	29.92	549	889			2417.0	
04/10/98	15:30	2689	2.1	2100	29.92	541	1114	0.011	1.1	2421.7	AS/SVE Fields 1&2
04/13/98	13:45	2760	6.6	1400	29.92	548	734	0.035	2.3	2430.1	AS/SVE Fields 1&2
04/23/98	10:15	2996	2.5	2100	29.92	522	1155	0.013	1.4	2448.2	Stack vel est., AS/SVE Fields 1&2
04/29/98	12:20	3142	11	2100	29.92	544	1108	0.058	5.8	2470.0	AS/SVE Fields 1&2
06/29/98	10:00	3885	11	700	29.92	563	357	0.058	1.9	2588.7	
06/29/98	12:30	3888	13	400	29.92	557	206	0.069	1.3	2588.9	
07/09/98	11:15	4127	30	700	29.92	556	361	0.160	5.2	2621.0	
07/09/98	15:45	4132	21	600	29.92	568	303	0.112	3.0	2621.8	
07/13/98	9:45	4221	16	1300	29.92	556	671	0.085	5.1	2636.9	
07/13/98	12:30	4223	14	1000	29.92	557	515	0.074	3.4	2637.3	
07/22/98	9:30	4217	14	1400	29.92	556	723	0.074	4.8	2636.3	#3&4, Meter data given not cumulative
07/22/98	12:00	4220	10	1200	29.92	558	617	0.053	2.9	2636.7	#1&2, Meter data given not cumulative
08/03/98	11:15	4505	10	1600	29.92	550	835	0.053	4.0	2677.8	#3&4
08/03/98	13:45	4508	7	1500	29.92	549	784	0.037	2.6	2678.2	#1&2
08/21/98	12:30	4745	5	1000	29.92	560	513	0.027	1.2	2697.1	#3&4
08/21/98	16:45	4749	7	1100	29.92	555	569	0.037	1.9	2697.4	#1&2

Cumulative Mass of Volatile Hydrocarbons Discharged
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
09/03/98	9:00	4839	8	1000	29.92	554	518	0.043	2.0	2704.7	#3&4
09/03/98	13:30	4842	10	1100	29.92	556	568	0.053	2.7	2704.9	#1&2
09/12/98	7:30	4909	17	2400	29.92	541	1274	0.090	10.3	2723.1	#1&2
09/12/98	10:45	4912	19	1400	29.92	549	732	0.101	6.6	2724.2	#3&4
09/16/98	12:40	4935	11	900	29.92	560	461	0.058	2.4	2728.5	#1&2
09/16/98	15:10	4937	8	1200	29.92	556	620	0.043	2.4	2728.7	#3&4
09/24/98	11:00	5155		6000	29.92	548	3144			2739.4	#3&4
09/24/98					29.92	460				2739.4	Field # 1&2 in repair for water in line
10/07/98	10:44	5279		5600	29.92	550	2923			2739.4	#3&4
10/07/98					29.92	460				2739.4	Field # 1&2 in repair for water in line
10/14/98	8:50	5351		5500	29.92	542	2914			2739.4	#3&4, water in lines
10/14/98					29.92	460				2739.4	Field # 1&2 in repair for water in line
10/21/98	8:45	5472		5800	29.92	531	3136			2739.4	#3&4
10/21/98	14:05	5477		5400	29.92	541	2866			2739.4	#1&2
10/22/98	9:05	5496		5600	29.92	530	3034			2739.4	#1 Offline
10/27/98	8:21	5617	38	5800	29.92	537	3101	0.202	56.1	2880.8	#1&2
10/27/98	13:00	5621	18.5	5800	29.92	540	3084	0.098	27.2	2887.7	#3&4
11/14/98	7:42	5814	78	5200	29.92	530	2817	0.415	104.6	3417.4	#1&2
11/14/98	9:21	5815	57	4900	29.92	531	2649	0.303	71.9	3421.1	#3&4
11/19/98	10:15	5931		6100	29.92	536	3268			3594.8	Field # 1&2
11/19/98	14:00	5935		6100	29.92	538	3255			3594.8	Field # 3&4
12/05/98	14:00	6319		6100	29.92	538	3255			3594.8	Data Interpolation
12/31/98	14:00	6391		6100	29.92	538	3255			3594.8	Data Interpolation
01/07/99	9:40	6478	14	5400	29.92	522	2970	0.074	19.8	3630.6	Field # 1&2
01/07/99	13:05	6481	17	5400	29.92	529	2931	0.090	23.7	3633.4	Field # 3&4
01/12/99	9:10	6593	15	5000	29.92	528	2719	0.080	19.4	3734.0	Field # 1&2
01/12/99	13:15	6597	10	5000	29.92	530	2709	0.053	12.9	3736.7	Field # 3&4
01/21/99	10:05	6810	21	6100	29.92	531	3298	0.112	33.0	3940.2	Field # 1&2
01/21/99	13:00	6816	23	6000	29.92	537	3208	0.122	35.1	3948.7	Field # 3&4
01/26/99	8:35	6929	27	6000	29.92	520	3313	0.144	42.6	4131.6	Field #1&2
01/26/99	12:05	6932	9.5	6000	29.92	524	3288	0.051	14.9	4135.2	Field # 3&4
02/05/99	9:30	7172		600	29.92	542	318			4209.5	No FID data for this event
02/12/99	15:00	7337		1200	29.92	545	632			4209.5	
02/17/99	13:00	7446		2200	29.92	554	1140			4209.5	
02/22/99	9:45	7561	7.3	1900	29.92	520	1049	0.039	3.6	4218.2	

Cumulative Mass of Volatile Hydrocarbons Discharged
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - BM-820
SVE Stack

Date	Time	SVE Valve Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Pressure (" Hg)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
03/03/99	10:00	7666	22	2000	29.92	545	1054	0.117	11.0	4250.3	
03/12/99	8:30	7878	9	4300	29.92	522	2365	0.048	10.1	4343.8	
03/17/99	13:00	8002	23	4700	29.92	562	2401	0.122	26.3	4437.9	
03/29/99	11:00	8186	36	5900	29.92	553	3063	0.191	52.5	4739.8	
04/08/99	12:00	8403	22	5700	29.92	556	2943	0.117	30.8	5116.4	
04/15/99	9:00	8569	6	5700	29.92	550	2976	0.032	8.5	5252.4	
04/21/99	8:00	8712	5	5200	29.92	527	2833	0.027	6.7	5297.8	
05/05/99	11:00	8933			30.92	460				5328.8	No readings available due to bad equip.
05/10/99	7:30	9051			31.92	460				5328.8	System down, heat exchanger
05/21/99	8:30	9071		5900	32.92	561	3020			5328.8	No FID data for this event
05/28/99	9:30	9240	9	5800	33.92	553	3011	0.048	12.9	5374.3	
05/31/99	9:30	9312	9	5800	34.92	553	3011	0.048	12.9	5413.0	*Extrapolated Data*
AVERAGE			21.2	3850.0	30.1	538	1949	0.113	25.3		

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

percent water vapor by volume	0.003
SVE Stack pipe diameter	10

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: absolute pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (526 degrees Rankine) at 68 degrees F (from Perry's handbook)

* Estimated value due to malfunctionng instrument

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

B = 0.003 from Perry's Chemical Handbook

A = 0.545 sq. ft

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 3* ***Date :*** *June 18,1999*

Contract Number : *N62470-97-D-5000*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *11* ***OHM Project No. :*** *20704*

(Building 1613, MCB Camp LeJuene, NC)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

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One Copy to: Contract Specialist: Collier, Maribeth	6500 Hampton Blvd. LRA, Bldg. A, Rm. 3700 Norfolk, VA 23508-1297
One Copy to: Activity Point of Contact Hall, Nikki	Building 58: AC/S EMD/IR PSC Box 20004, MCB Camp Lejeune, NC 28542-0004
One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

Project Manager: Dunn, James A Norcross, GA
Contract Admin.: Hussey, Julia Virginia Beach, V
File (5)

MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-97-D-5000 **Delivery Order No.** 0011 **Report Dates:** May 1, 1999 To May 31, 1999

Project Name: Building 1613 SVE/Air Sparge **Project Location:** MCB Camp Lejeune, N.C.

Project No.: 20704 **Project Manager:** James A. Dunn, Jr., P.E.

Project Description: Installation of Air Sparge/SVE systems at Building 1613 to remediate petroleum contaminated soils and groundwater and operation and maintenance of the system for six months.

SHORT FORM STATUS

X	**Pre-Construction**		☐	**Post-Construction**	
X	**Site Walk**	(Date:00/00/00)		**Demobilization**	(Date: 00/00/00)
X	**Design Review**			**Post Con. Submittal**	(Due: 00/00/00)
X	**Cost Proposal**	(Submittal Date: 06/03/98)	X	**O&M**	(Completion Date: 05/26/99)

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**
	Regulatory Issue(s)		**Submittal Review**
	Analytical		**Postponement**

Modification Number Pending:

Date submitted: (00/00/00)

Amount: $

Significant Activities Performed/Associated With Item(s) Above: Normal operation and maintenance of the system. During March 1999, removed an estimated total of 585 lbs. of hydrocarbons from the site bringing the total to date to 27,227 lbs. Responded to an RFP to extend O & M activities for twelve months and received award of modification.

Schedule Information (updates and variances): Current schedule includes an additional 12 mos. of system O & M

Financial Information:

Current D.O. Ceiling (w/o fee):	$	$463,182.00
Total $ to Date (w/o fee)	$	232,369.00
Estimated Report Period $:	$	3,535.00
Forecast @ Completion:	$	$ 463,182.00

Other Information: None.

Approved by:

John P. Franz, P.E.
Program Manager

Cumulative Mass of Volatile Hydrocarbons Discharged
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Building 1613
SVE Stack

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
11/16/98	11:30	3087	1130	5000	550	418	6.01	224.61		
11/17/98	9:45	3093	1130	5000	550	418	6.01	224.69	56.16	
11/20/98	10:30	3166	2350	5000	550	418	12.50	467.28	1108.53	
12/01/98	11:30	3427	2672	3300	551	275	14.21	350.02	5552.62	
12/11/98	11:00	3662	1700	3100	543	262	9.04	212.28	8305.57	
12/15/98	10:35	3757	1833	3100	541	263	9.75	229.73	9160.40	BOD - Received on 12/15/98
12/22/98	12:20	3927	2193	3500	551	292	11.66	304.69	11073.15	
01/08/99	15:05	3982	2635	3400	540	289	14.01	362.88	11838.07	
01/11/99	13:50	4052	1032	3100	540	264	5.49	129.58	12556.25	
01/20/99	14:35	4227	594.5	4000	542	339	3.16	95.96	13378.56	
01/29/99	14:45	4444	402	3300	556	273	2.14	52.19	14048.33	
02/05/99	17:06	4498	20716	2400	542	203	110.16	2006.40	16364.24	
02/11/99	15:30	4640	232	2700	559	222	1.23	24.53	22372.43	
02/18/99	14:10	4807	682	2200	556	182	3.63	59.02	22663.13	
02/26/99	10:00	4995	840	1600	539	136	4.47	54.54	23107.92	
03/05/99	11:00	5162	1008	2500	547	210	5.36	100.77	23648.26	
03/08/99	14:00	5239	778	2500	548	210	4.14	77.63	23934.44	
03/18/99	8:30	5473	704	2700	555	224	3.74	74.91	24678.08	
03/25/99	16:04	5640	1592	2500	552	208	8.47	157.70	25487.39	
03/31/99	12:00	5784	367	2600	560	213	1.95	37.27	26072.31	
04/06/99	11:30	5930	188	3000	558	247	1.00	22.11	26252.92	
04/13/99	13:00	6020	303	3000	561	246	1.61	35.44	26360.82	
04/20/99	11:00	6192	119	2400	553	199	0.63	11.30	26528.29	
04/30/99	11:30	6433	108	2600	535	223	0.57	11.48	26642.65	
05/04/99	12:00	6524	508	1800	554	149	2.70	36.10	26732.85	
05/12/99	8:30	6716	184	2400	560	197	0.98	17.25	26946.25	
05/19/99	13:00	6882	132	2800	564	228	0.70	14.33	27055.47	
05/31/99	13:00	7170	132	2800	564	228	0.70	14.33	27227.48	Extrapolated Data

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: *number of carbon atoms in calibration gas* (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream, calculation assumes saturated water stream or B = 0.

V: *vapor velocity (ft/min)*

A: cross-sectional area (sq. ft)

P: absolute pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine) at 68 degrees F (from Perry's handbook)

* Estimated value due to malfunctionng instrument

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

B = 0.003 from Perry's Chemical Handbook

A = 0.0873 sq ft

percent water vapor by volume	0.003
SVE Stack pipe diameter	4

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 3* ***Date :*** *May 14,1999*

Contract Number : *N62470-97-D-5000*

Reporting Period : From: April 01,1999 To: April 30,1999

Delivery Order No : *14* ***OHM Project No. :*** *20764*

(Hadnot Point Fuel Farm, Bldg. 1115, MCB, Camp Lejuene)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

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Original to :	
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One Copy to: RAC CM Hedley, Greg	6500 Hampton Blvd., Code 0531 LRA, Bldg. A, Rm. 2410 Norfolk, VA 23508-1297

OHM DISTRIBUTION :

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Contract Admin.: Hussey, Julia Virginia Beach, V
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MONTHLY PROGRESS REPORT
CONTRACT N62470-97-D-5000
DELIVERY ORDER 0014
OHM Project 920764
April 30, 1999

CONSTRUCTION AND OPERATION OF BIOSPARGING, AIR SPARGING, AND SOIL VAPOR EXTRACTION SYSTEMS WITH AGGRESSIVE FLUID VAPOR RECOVERY AT HADNOT POINT FUEL FARM/BUILDING 1115 MCB CAMP LEJEUNE, NORTH CAROLINA

Project Manager: Jim Dunn

Approved by:

John P. Franz
Program Manager

1.0 INTRODUCTION

This Monthly Progress Report has been prepared to summarize the activities performed from March 1, 1999 to March 31, 1999, as well as a summary of the work planned for the month of April 1999 by OHM Remediation Services Corp., (OHM), on Delivery Order 0014 of the Navy-LANTDIV RAC Contract N62470-97-D-5000. This delivery order was signed on June 30, 1998.

The remediation effort consists of:

1. Preparation of Work Plans including detailed drawings, HASP, FSP, T & D, and EPP plans.
2. Installation of a biosparging, air sparging and soil vapor extraction (SVE) systems at the Hadnot Point Fuel Farm/Building 1115 to remediate TPH contaminated soils.
3. Provision of aggressive fluid vapor recovery(AFVR) services to remove free product, if encountered.
4. Installation and hook-up of recovery wells and re-commissioning of the water treatment system at Hadnot Point Fuel Farm.
5. Operation and maintenance of the systems for a period of six months.

All work is to be performed in accordance with the Statement of Work Design dated May 14, 1998 and the proposed Corrective Action Plan prepared by Catlin & Assoc. forwarded with the Request for Proposals dated May 18, 1998, OHM's proposal dated June 17, 1998 and revisions dated June 22, 1998. The total current value of this delivery order including modifications is $1,483,522.00 exclusive of fee.

2.0 WORK ACCOMPLISHED

During the month of April 1999, OHM has performed the following:

1. Continued site restoration activities at both sites. At month end, paving restoration was underway.
2. Received BOD for both sites.
3. Continued AFVR events in wells where warranted.
4. Continued to fine tune all systems.
5. Operated and maintained the northwest system removing a total of 292 lbs. of hydrocarbons for the month. The southeast system removed a total of 2,398 lbs. of hydrocarbons for the month.

3.0 WORK PLANNED

During the month of May 1999, OHM is scheduled to perform the following:

1. Complete site restoration activities.
2. Continue to operate and maintain both systems.

4.0 PROBLEMS AND SOLUTIONS

During the month no new problems arose; all previous issues have been resolved.

5.0 COST/SCHEDULE SUMMARY

Cost Summary:

The following is a summary of the costs associated with this delivery order. A detailed performance report is attached.

D.O. ceiling amount (without fee)	$1,483,522.00
Approximate cost through April 1999	$1,317,854.00
Approximate cost for April 1999	$ 54,939.00
Remaining funds	$ 165,668.00
Estimated cost to complete	$ 100,386.00
Current period estimate at complete	$1,418,239.00
Prior period estimate at complete	$1,404,968.00
Physical % complete	88.82%
Financial % complete	88.63%

Apparent cost savings are due to lower costs of plans preparation than estimated and re-use of equipment from STT-69. Application of cost savings to fund additional months of O & M will occur after the August 1999 six-month contractual period.

Schedule Summary:

Original contract completion date	07/22/99
Current contract completion date	07/22/99
Prior period schedule construction completion date	02/26/99
Current period schedule construction completion date	02/26/99
Prior period O & M completion date	12/31/99
Current period O & M completion date	12/31/99

A current schedule is attached to this report.

6.0 NON-COMPLIANCE CHECKOFF LIST

No non-compliance issues have been associated with this delivery order.

7.0 WASTE MATERIALS TRACKING

No waste materials were generated during the month.

8.0 GOVERNMENT MATERIALS TRACKING

No government owned materials have been utilized on this delivery order.

9.0 MODIFICATION LOG

No modifications have been issued under this delivery order at this time.

10.0 WORK DIRECTIVE LOG

The current work directive log is attached.

11.0 ATTACHMENTS

Performance Report (1 page)
Current Schedule (2 pages)
Work Directive Log (1 page)
Hydocarbon Summary Report (5 page)

Delivery Ord...

Remedial Action ...g 1115, Camp Lejeune

PERFORMANCE REPORT
ACTUAL DOLLARS AS OF 04/30/99
NOTE: ALL DOLLARS INCLUDE MARK-UPS; AWARD FEE IS NOT INCLUDED

BOLD OVERRIDE AUTOMATIC CALCULATION

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
WBS CODE	DESCRIPTION	CURRENT BUDGETED QUANTITY	QUANTITY REVISIONS/ ADJUSTMENTS	PROJECTED QUANTITY AT COMPLETION (C+D)	TASK UNIT	INSTALLED QUANTITY	TASK PERCENT COMPLETE (G/E)	CURRENT BUDGETED DOLLARS	DOLLAR REVISIONS/ ADJUSTMENTS (D×O)	PROJECTED BUDGETED DOLLARS (I+J)	EARNED DOLLARS (H×K)	ACTUAL DOLLARS TO DATE	CPI (M/L)	BUDGETED COST/UNIT (I/C)	ACTUAL COST/UNIT TO DATE (M/G)	ETC BASED ON ACTUAL COSTS TO DATE (see note Q)	FORECAST (BUDGET IF LESS THAN 15% COMPLETE) (M+Q)	VARIANCE FROM CURRENT BUDGET (R-I)	PERCENT OF TOTAL PROJECT (K/TOTAL K)	PHYSICAL PERCENT COMPLETE (H×T)
10000000	O & M Manual / As-Builts	100	0	100	%	60	60.0%	11,130	0	11,130	6,683	15,840	2.37	111.30	264.00	5,000	20,840	9,702	0.75%	0.45%
20000000	Work Plans	100	0	100	%	100	100.0%	15,109	0	15,109	15,109	21,055	1.39	151.09	210.55	0	21,055	5,946	1.02%	1.02%
21000000	Drawings & Specs	100	0	100	%	100	100.0%	16,682	0	16,682	16,682	3,810	0.23	166.82	38.10	0	3,810	(12,872)	1.12%	1.12%
22000000	Const Sched	100	0	100	%	90	90.0%	3,219	0	3,219	2,897	0	0.00	32.19	0.00	300	300	(2,919)	0.22%	0.20%
23000000	Initial Procurement	100	0	100	%	90	90.0%	9,853	0	9,853	8,867	12,181	1.37	98.53	135.29	300	12,481	2,629	0.66%	0.60%
24000000	Mob / Demob	100	0	100	%	90	90.0%	37,826	0	37,826	34,044	46,851	1.35	378.26	511.60	2,000	48,851	10,229	2.55%	2.29%
25000000	NW Site Prep	100	0	100	%	100	100.0%	7,075	0	7,075	7,075	4,983	0.70	70.75	49.83	0	4,983	(2,092)	0.48%	0.48%
26000000	Refurb Hadnot WWTP	100	0	100	%	90	90.0%	12,879	0	12,879	11,591	7,279	0.63	128.79	80.87	3,000	10,279	(2,601)	0.87%	0.78%
30000000	NW Install Air Sparge Wells	100	0	100	%	100	100.0%	8,244	0	8,244	8,244	12,890	1.56	82.44	128.90	0	12,890	4,649	0.55%	0.56%
30100000	NW Install Bio Sparge Wells	100	0	100	%	100	100.0%	36,564	0	36,564	36,564	29,712	0.81	365.64	297.12	0	29,712	(6,852)	2.46%	2.46%
30200000	NW Bio Sparge Pilot Test	100	0	100	%	100	100.0%	4,785	0	4,785	4,789	19,904	4.16	47.85	199.04	0	19,904	15,119	0.32%	0.32%
31000000	NW SVE Horiz Well / Trench	100	0	100	%	100	100.0%	96,309	0	96,309	96,309	43,252	0.45	963.09	432.52	0	43,252	(53,138)	6.50%	6.50%
33000000	NW Bio/SVE/Air Sparge WH	100	0	100	%	100	100.0%	27,714	0	27,714	27,714	15,986	0.58	277.14	159.86	0	15,986	(11,728)	1.87%	1.87%
34000000	NW Remed Sys Install	100	0	100	%	100	100.0%	137,604	0	137,604	137,604	97,604	• 0.71	1,376.04	976.04	0	97,604	(40,000)	9.28%	9.28%
36000000	NW Site Restoration	100	0	100	%	95	95.0%	6,271	0	6,271	5,957	22,566	3.79	62.71	237.53	1,500	24,066	17,795	0.42%	0.40%
37000000	NW Sys Startup / O&M	100	0	100	%	100	100.0%	7,880	0	7,880	7,880	11,219	1.42	78.80	112.19	0	11,219	3,339	0.53%	0.53%
40000000	System O & M	100	0	100	%	33	33.0%	10,162	0	10,162	3,364	13,300	3.97	101.62	403.03	30,000	43,300	33,137	0.69%	0.23%
55000000	SE Site Prep	100	0	100	%	100	100.0%	7,453	0	7,453	7,453	6,290	0.84	74.53	62.90	0	6,290	(1,163)	0.50%	0.50%
60000000	SE Install Air Sparge Wells	100	0	100	%	100	100.0%	40,961	0	40,961	40,961	39,913	0.97	409.61	399.13	0	39,913	(1,047)	2.92%	2.92%
60100000	SE Install Bio Sparge Wells	100	0	100	%	100	100.0%	29,729	0	29,729	29,729	30,838	1.04	297.29	308.38	0	30,838	1,109	2.09%	2.09%
61000000	SE SVE Horiz Well / Trench	100	0	100	%	100	100.0%	220,950	0	220,950	220,950	313,488	1.42	2,209.50	3,134.88	- 0	313,488	92,538	14.02%	14.02%
63000000	SE Bio/SVE/Air Sparge WH	100	0	100	%	100	100.0%	74,296	0	74,296	74,298	67,960	0.91	742.96	679.60	0	67,960	(6,336)	5.01%	5.01%
64000000	SE Remed Sys Install	100	0	100	%	90	90.0%	206,879	0	206,879	186,191	190,443	1.02	2,068.79	2,116.03	0	190,443	(16,436)	13.55%	12.88%
66000000	SE Site Restoration	100	0	100	%	50	50.0%	5,969	0	5,969	2,984	28,028	9.56	59.69	576.85	8,000	33,028	27,059	0.40%	0.20%
67000000	SE System Startup / Opt	100	0	100	%	100	100.0%	11,696	0	11,696	11,800	17,905	1.54	116.96	179.05	0	17,905	6,209	0.79%	0.79%
70000000	AFVR	100	0	100	%	90	90.0%	42,035	0	42,035	37,832	52,779	1.40	420.35	586.43	14,000	66,779	24,744	2.83%	2.55%
80000000	Sampling & Analysis	100	0	100	%	33	33.0%	62,632	0	62,632	20,680	21,514	• 0.00	626.32	651.93	30,000	51,514	(11,118)	4.22%	1.39%
90000000	Fuel	100	0	100	%	75	75.0%	0	0	0	0	6,364	N/A	0.00	84.85	1,300	7,664	7,664	0.00%	0.00%
99000100	Admin & Support	100	0	100	%	75	75.0%	185,430	0	185,430	139,073	93,922	0.68	1,854.30	1,252.29	10,000	103,922	(81,508)	12.50%	9.37%
99400100	Per Diems	100	0	100	%	75	75.0%	127,073	0	127,073	95,305	63,502	0.67	1,270.73	847.16	2,000	65,502	(61,492)	8.57%	6.42%
15000000	Transport & Disposal	100	0	100	%	100	100.0%	10,977	0	10,977	10,977	2,119	0.19	109.77	21.19	0	2,119	(8,858)	0.74%	0.74%
	TOTAL PROJECT COSTS							1,403,522	0	1,403,577	1,317,601	1,317,054	1.00			100,306	1,418,239	(65,283)	100.00%	88.02%

NOTES: Note Q: Calculation of ETC is "@IF(G25=0,K25-M25,@IF(H25>0.15,(E25-G25)*P25,@IF(M25<K25,K25-M25,(E25-G25)*P25)))"

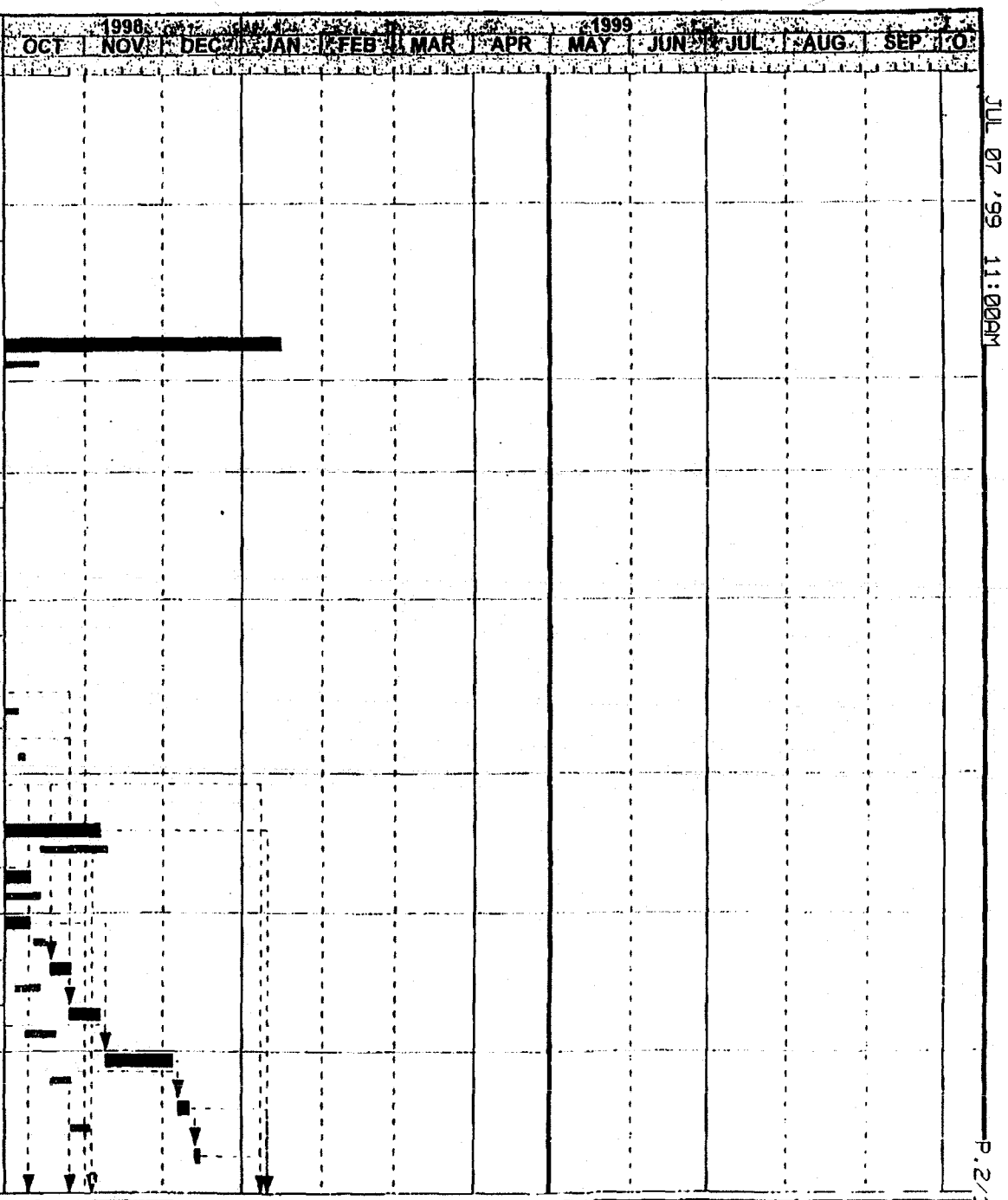
FINANCIAL PERCENT COMPLETE (M/I) 88.03%
(Actual Costs / Current Budgeted Dollars)

1)
2)
3)
4)
5)

VARIANCE ANALYSIS:
1)
2)
3)
4)
5)
6)
7)
8)

JUL 07 '99 10:22AM

Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish
Pre-Award Activities					
10	Proposal Preparation	0	0		17JUN98A
20	Negotiation & Award	9	0	18JUN98A	30JUN98A
Premobilization Activities					
30	Plans Preperation	30	0	01JUL98A	07AUG98A
35	Plans Review	15	0	10AUG98A	02SEP98A
40	Initial Procurement	45	0	10AUG98A	15JAN99A
25	Plans Revision	10	0	02SEP98A	03SEP98A
45	Precontract Conference	1	0	09SEP98A	09SEP98A
Mobilization / Site Set-up					
50	Mobilization	1	0	10SEP98A	10SEP98A
55	Site Set-up	1	0	11SEP98A	11SEP98A
Northwest Site					
130	Bio Test Well Installation	2	0	14SEP98A	15SEP98A
132	Bio Test	5	0	21SEP98A	25SEP98A
134	Air Sparge Well Installation NW	3	0	22SEP98A	24SEP98A
100	Site Preperation NW	5	0	24SEP98A	25SEP98A
160	Piping NW	18	0	26SEP98A	06NOV98A
135	SVE Horizontal Well NW	14	0	28SEP98A	10OCT98A
164	SVE / AS Wellheads NW	5	0	28SEP98A	10OCT98A
138	Jack & Bore Crossings NW & SE	8	0	19OCT98A	26OCT98A
131	Bio Sparge Well Installation NW	8	0	26OCT98A	06NOV98A
162	Bio Wellheads NW	6	0	09NOV98A	04DEC98A
170	Remediation System Installation NW	5	0	07DEC98A	11DEC98A
180	Site Restoration NW	2	0	14DEC98A	15DEC98A



Project Start	01JUN98	Early Bar
Project Finish	31AUG99	Target Bar
Data Date	30APR99	Progress Bar
Run Date	07MAY99	Critical Activity

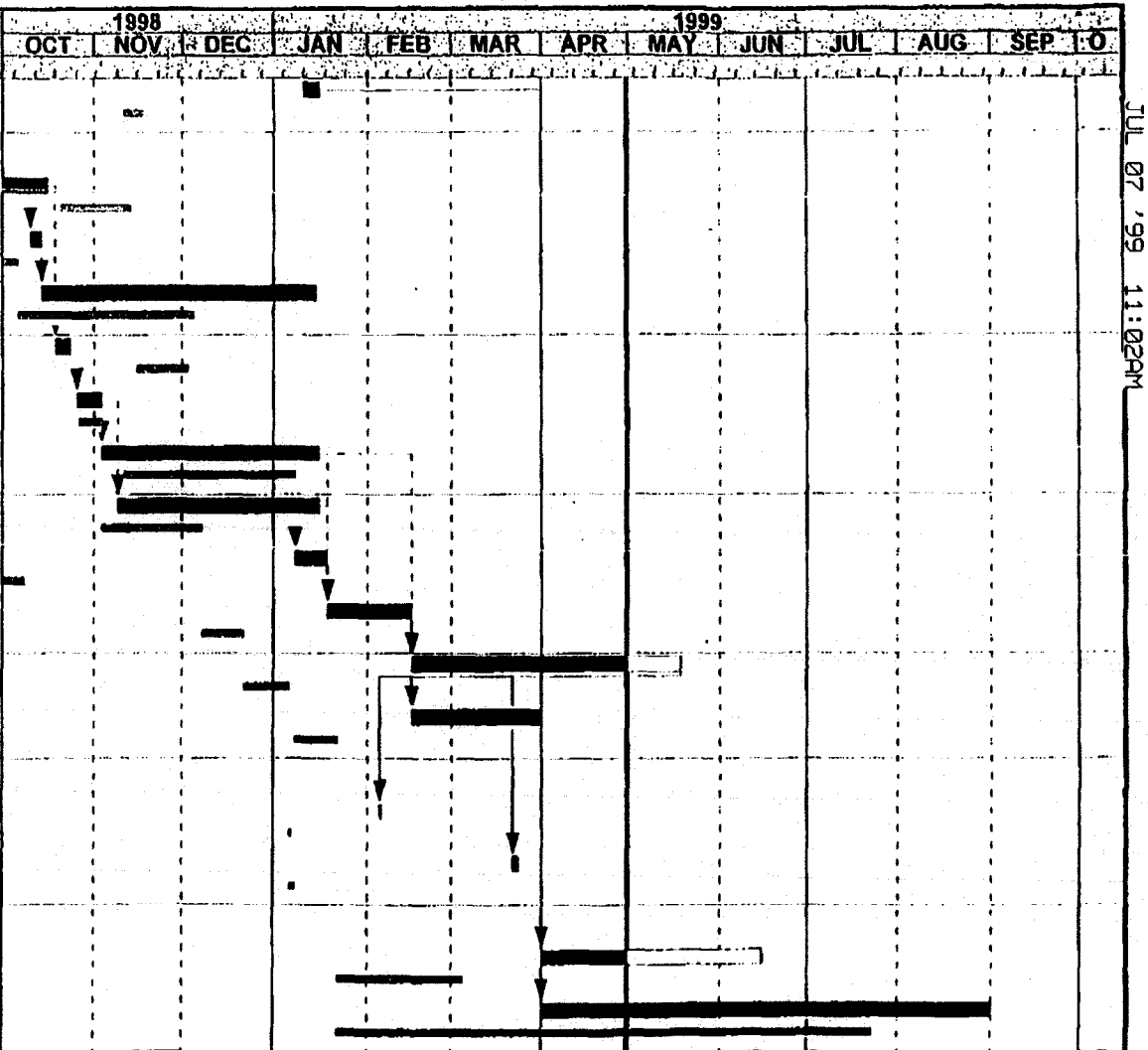
0499

Sheet 1 of 2

OHM Remediation Services Corp
Hannot Point Fuel Farm (20764)
Project 20764 (DO 014)

JUL 07 '99 11:00AM P.2/14

Activity ID	Activity Description	Orig Dur	Rem Dur	Early Start	Early Finish
190	Start-up NW	5	0	11JAN99A	15JAN99A
Southeast Site					
334	Air Sparge Well Installation SE	18	0	25SEP98A	15OCT98A
300	Site Prep SE	7	0	10OCT98A	13OCT98A
335	SVE Horizontal Well SE	42	0	14OCT98A	14JAN99A
330	Bio Well Installation SE	11	0	19OCT98A	23OCT98A
362	Bio Wellheads SE	6	0	26OCT98A	03NOV98A
360	Piping SE	32	0	04NOV98A	15JAN99A
364	SVE / AS Wellheads SE	22	0	09NOV98A	15JAN99A
60	Refurbish HPTP SE	7	0	08JAN99A	18JAN99A
370	Remediation System Installation SE	10	0	19JAN99A	15FEB99A
380	Site Restoration SE	3	13	16FEB99A	18MAY99
390	Start-up SE	10	0	16FEB99A	31MAR99A
Demobilization / Clean-up					
750	T&D Waste / Debris	1	0	05FEB99A	05FEB99A
700	Site Tear Down & Demobilization	2	0	22MAR99A	23MAR99A
Operations & Maintenance					
810	O&M Manual	54*	33*	01APR99A	15JUN99
820	Operations & Maintenance	109*	88*	01APR99A	31AUG99



JUL 07 '99 11:02AM

P.3/14

Project Start 01JUN98
Project Finish 31AUG99
Data Date 30APR99
Run Date 07MAY99

Early Bar
Target Bar
Progress Bar
Critical Activity

0499

Sheet 2 of 2

OHM Remediation Services Corp
Hannot Point Fuel Farm (20764)
Project 20764 (DO 014)

Work Directive Log

Impacts

Hadnot Point Fuel Farm/Building 1115

Delivery Order: 14

Project Number: 920764

Costs are a Rough Order of Magnitude (ROM). It is not actual cost, nor is it a final change request value.

Work Directive Number	Change Type	Date of Request	Date of Approval	Status	Critical Approval Date	Description of Work	Estimated Duration of Task	Schedule Extension (Y / N)	Estimated Cost (ROM)
1	SG	11/6/98	11/8/98	A	N/A	Free Product Investigation	3	N	$5,000
2	SG	12/9/98	12/9/98	A	N/A	Concrete Slab Building 1111	3	N	$6,000
3	SG	12/9/98	12/9/98	A	N/A	T&D of Free Product Produced During AFVR Events.	90	N	$2,500
								Total	$13,500

Change Type:

TD - Technical Directive

SG - Scope Growth

SR - Scope Reduction

Status:

A - Approved

P - Pending

R - Rejected

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, North West
AS/SVE Field 1

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
02/11/99								System Start-Up
02/15/99	14:00							System down with full tank
02/16/99	10:00							System down with full tank
02/17/99	13:30	94						System down for compressor
02/18/99	10:30	115						System daily ops. Check
02/19/99	13:00	141	1038		5.52		2.99	
02/22/99	15:15	215	2420	123	12.87	141.99	31.34	Water in Header Line
03/05/99	8:00	411	1675	556	8.91	443.44	120.26	
03/11/99	9:30	558	960	290	5.11	132.70	163.17	
03/18/99	11:00	725	653		3.47		193.02	Water in Header Line
03/25/99	14:45	886	1448	91	7.70	62.68	230.49	
04/01/99	10:00	929	1416	55	7.53	37.02	244.14	
04/06/99	13:00	1027	548	130	2.91	33.89	265.46	
04/13/99	15:00	1190	201	49	1.07	4.69	278.98	
04/20/99	14:00	1364	121		0.64		285.19	Water in Header Line
04/30/99	14:30	1603	132		0.70		291.89	Water in Header Line

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

M = Q x C x 0.0895

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

$K_{4\text{-inch}}$ = 42 (SVE Field 1)

Cumulative Mass of Volatile Hydrocarbons Discharged
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, North West
SVE Stack

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
02/11/99										
02/15/99	14:00									
02/16/99	10:00									
02/17/99	13:30	94								
02/18/99	10:30	115								
02/19/99	13:00	141	269	300	531	26	1.43	3.30	1.79	
02/22/99	15:15	215	327	1300	528	112	1.74	17.44	33.75	
03/05/99	8:00	411	371	3000	536	255	1.97	44.97	288.56	
03/11/99	9:30	558	233	5500	549	456	1.24	50.60	581.28	
03/18/99	11:00	725	140	5300	571	381	0.74	25.42	845.78	
03/25/99	14:45	886	427	6500	566	523	2.27	106.20	1287.26	
04/01/99	10:00	929	168	4700	570	375	0.89	30.00	1409.27	
04/06/99	13:00	1027	88	5600	570	447	0.47	18.72	1506.75	
04/13/99	15:00	1190	51	6600	569	528	0.27	12.81	1615.84	
04/20/99	14:00	1364	35	2800	555	230	0.19	3.82	1676.15	
04/30/99	14:30	1603	38	2900	542	243	0.20	4.40	1717.12	

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$ FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: absolute pressure of flowstream (" Hg)

P_{std} standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std} standard temperature (528 degrees Rankine) at 68 degrees F (from Perry's handbook)

* Estimated value due to malfunctionng instrument

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg mole

Kg = 24.07 dsm^3/10^6 gm -mole

B = 0.003 from Perry's Chemical Handbook

A = 0.0873 sq. ft

percent water vapor by volume	0.003
SVE Stack pipe diameter	4

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #1 (Motor Pool)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/29/99								System Start-Up
03/30/99	7:30							Start-Up, Troubleshoot electrical problems
04/01/99	10:30	213	16138	39	85.82	298.49	380.82	
04/02/99	10:00	236	7242	683	38.51	2352.95	440.40	
04/09/99	8:00	304	26110	185	138.85	2298.73	691.66	
04/16/99	9:30	402	24803	201	131.90	2369.64	1244.43	
04/23/99	8:30	485	4644	465	24.70	1028.81	1515.21	
05/01/99	8:30	586	4532	520	24.10	1121.39	1617.88	

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

A = 0.196 sq.ft

Cumulative Mass of Recovered Volatile Hydrocarbons
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
AS/SVE Field #2 (Fuel Farm)

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Calculated Vapor Flowrate (Q) (pitot tube) (SCFM)	TH Conc (C) (mg/l)	TH Recovery Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Recovered (lbs)	Comments
03/29/99								System Start-Up
03/30/99	7:30							Start-Up, Troubleshoot electrical problems
04/01/99	10.30	213	21030	629	111.83	6292.71	496.26	
04/02/99	10:00	236	6088	183	32.37	530.22	565.36	
04/09/99	8:00	304	2887	111	15.35	152.07	632.98	
04/16/99	9.30	402	2539	107	13.50	129.58	691.89	
04/23/99	8:30	485	2043	1044	10.86	1015.00	734.02	
05/01/99	8:30	586	2168	995	11.53	1026.69	781.14	

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$: FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: gauge pressure of flowstream (" Hg)

P_{std}: standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std}: standard temperature (528 degrees Rankine)

* = Estimated value

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

A = 0.349 sq.ft

Cumulative Mass of Volatile Hydrocarbons Discharged
Air Sparging (AS) / Soil Vapor Extraction (SVE) System
MCB CAMP LEJEUNE - Hadnot Point Fuel Farm, South East
SVE Stack

Date	Time	SVE Blower Hour Meter (Hrs)	TH Conc ($PPM_{measured}$) (PPMv)	Vapor Velocity (V) (ft/min)	Absolute Temperature (degrees Rankine)	Calculated Vapor Flowrate (Q) (SCFM)	TH Conc (C) (mg/l)	TH Discharge Rate (M) (lb/day)	Cumulative Mass of Hydrocarbons Discharged (lbs)	Comments
03/29/99										
03/30/99	7:30									
04/01/99	10:30	213	6776	1300	544	439	36.03	1414.52	6276.93	
04/02/99	10:00	236	5654	6600	567	2136	30.07	5749.20	9709.55	
04/09/99	8:00	304	17907	6300	567	2039	95.23	17380.86	42477.14	
04/16/99	9:30	402	13147	6200	569	2000	69.91	12514.03	103512.55	
04/23/99	8:30	485	4555	600	544	203	24.22	439.42	125911.21	
05/01/99	8:30	586	4816	700	522	246	25.61	564.87	128024.40	

Notes:

$C = (PPM_{measured}) \times K \times (M_g/K_g) / 1000$

C: vapor concentration (mg/l)

$PPM_{measured}$ FID reading (PPM)

K: number of carbon atoms in calibration gas (1 in methane)

TH: total hydrocarbons calculated as gasoline (GRO)

$Q = (1-B) \times V \times A \times (P/P_{std}) \times (T_{std}/T)$

Q: vapor flowrate (SCFM)

B: percent water vapor in flowstream

V: vapor velocity (ft/min)

A: cross-sectional area (sq. ft)

P: absolute pressure of flowstream (" Hg)

P_{std} standard pressure (29.92" Hg)

T: absolute temperature of flowstream (degrees Rankine)

T_{std} standard temperature (528 degrees Rankine) at 68 degrees F (*from Perry's handbook*)

$M = Q \times C \times 0.0895$

M: hydrocarbon recovery rate (lb/day)

Assumptions:

Mg = 128 mg/mg-mole

Kg = 24.07 dsm^3/10^6 gm -mole

B = 0.003 from Perry's Chemical Handbook

A = 0.3491 sq ft

percent water vapor by volume	0.003
SVE Stack pipe diameter	8

* Estimated value due to malfunctionng instrument

MONTHLY PROGRESS REPORT DISTRIBUTION COVER SHEET

Contract Name : *RAC 3* ***Date :*** *June 16,1999*

Contract Number : *N62470-97-D-5000*

Reporting Period : From: May 01,1999 To: May 31,1999

Delivery Order No : *34* ***OHM Project No. :*** *780151*

(Prepare fee proposal for Work Plan Wilson Bay removal action)

Attached is the above-referenced OHM Monthly Progress Report. Distribution is being made as indicated below. If there should be any questions, please contact the Project manager or Dean Napoli at (609) 588-6493.

DISTRIBUTION :	***ADDRESS :***
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COTR - Karen Wilson, Code 18311	6500 Hampton Blvd., Code 1831 LRA, Bldg. A, Rm. 2115 Norfolk, VA 23508-1297
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OHM DISTRIBUTION :

Project Manager: **Dunn, James A** Norcross, GA
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MONTHLY PROGRESS REPORT - SHORT FORM

Contract No. N62470-97-D-5000 **Delivery Order No.** 0034 **Report Dates:** May 1, 1999 To May 31, 1999

Project Name: Piling Removal – Wilson Bay **Project Location:** MCB Camp Lejeune, N.C.

Project No.: 780151 **Project Manager:** James A. Dunn, Jr., P.E.

Project Description: Remediate Wilson Bay through the removal of approximately 140 piling, wood debris and tires.

SHORT FORM STATUS

X	**Pre-Construction**		☐	**Post-Construction**	
	Site Walk*	(Date:00/00/00)		**Demobilization**	(Date: 00/00/00)
X	**Design Review**			**Post Con. Submittal**	(Due: 00/00/00)
X	**Cost Proposal**	(Submittal Date: 03/16/99)		**O&M**	(Completion Date: 00/00/00)

*Notes Attached

☐ **Dormant**

	Awaiting T&D		**Technical Review**	**Modification Number**
	Regulatory Issue(s)		**Submittal Review**	**Date submitted:**
	Analytical		**Postponement**	**Amount:**

Significant Activities Performed/Associated With Item(s) Above: Participated in Pre-Con Meeting 5/11/99 and mobilized for field activities May 17, 1999. Removed 131 piling, 164-4 x 8 struts, 64 logs, 4 trees, 1 engine block, 7 tires and 10 misc. items Completing all extraction activities by 5/28/99. Will sample and analyze material for disposal options and T & D materials in June.

Schedule Information (updates and variances): Current schedule attached.

Financial Information:

Current D.O. Ceiling (w/o fee):	$	63,501.00
Total $ to Date (w/o fee)	$	32,046.00
Estimated Report Period $:	$	26,781.00
Forecast @ Completion:	$	44,100.00

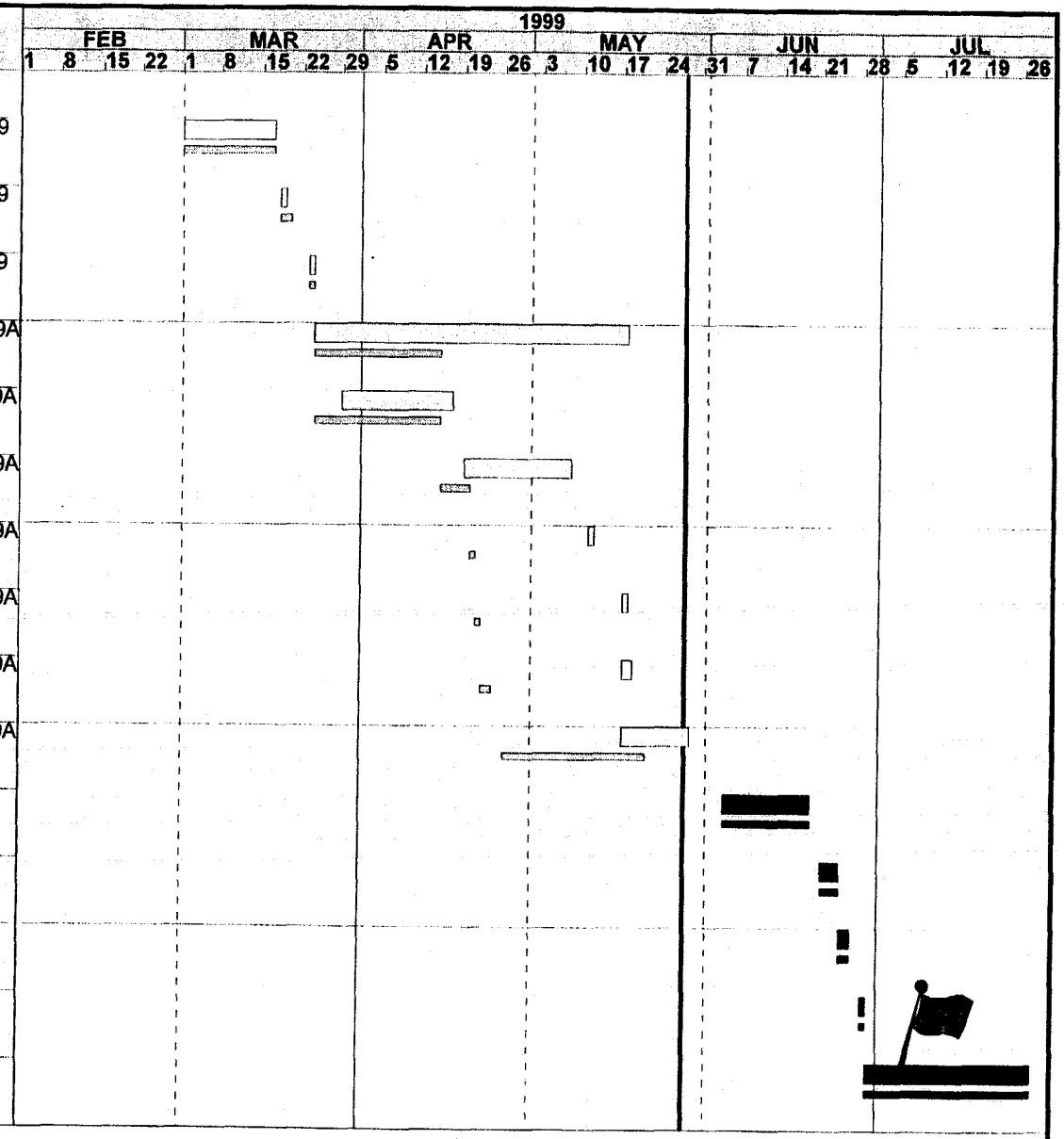
Other Information: EAC indicates a cost savings due to selection of an alternate marine subcontractor.

Approved by:

John P. Franz

John P. Franz, P.E.
Program Manager

Activity ID	Activity Description	Orig Dur	Early Start	Early Finish
Project 780151 - DO 0034				
01000000	PROPOSAL PREPARATION & SUBMITTAL	22	01MAR99A	16MAR99
01010000	NEGOTIATIONS	10	18MAR99A	18MAR99
01020000	CONTRACT AWARD	1	23MAR99A	23MAR99
04000000	INITIAL PROCUREMENT	53*	24MAR99A	17MAY99A
02000000	PLANS PREPARATION	20	29MAR99A	16APR99A
03000000	GOVERNMENT REVIEW & APPROVAL	35*	19APR99A	07MAY99A
04010000	PRE-CONSTRUCTION MEETING	1	11MAY99A	11MAY99A
05010000	MOBILIZATION	1	17MAY99A	17MAY99A
05020000	SITE PREP., RD IMPROVEMENTS, CLEAR & GRUB	2	17MAY99A	18MAY99A
05030000	PILING & DEBRIS REMOVAL	10	17MAY99A	28MAY99A
05040000	SAMPLING & ANALYSIS	11	04JUN99	18JUN99
05050000	TRANSPORTATION & DISPOSAL	3	21JUN99	23JUN99
05060000	SITE RESTORATION & REVEGETATION	2	24JUN99	25JUN99
05070000	DEMOBILIZATION	1	28JUN99	28JUN99
06000000	FINAL REPORT	21	29JUN99	27JUL99



Project Start	01MAY98
Project Finish	27JUL99
Data Date	28MAY99
Run Date	08JUN99

Early Bar
Target Bar
Progress Bar
Critical Activity

0399

Sheet 1 of 1

OHM Remediation Services Corporation
Piling Removal - Wilson Bay
MCB, Camp Lejune, North Carolina

Date	Project 780151 - DO 0034 Revision	Checked	Approved