



**OHM Remediation
Services Corp.**

A Subsidiary of OHM Corporation

10 December 1996

Mr. Steve Lehman, PE, REP
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, PA 19113

Re: OHM Prove Out Report for October and November 1996
Delivery Order No. 036
Contract No. N62470-93-D-3032

October 1996

The water treatment plant effluent averaged 30.16 g.p.m. for the month of October 1996. 6,879,152 gallons have been treated as of October 31, 1996. The process effluent averaged 45.8 g.p.m.. excluding down time.

The water treatment plant was not operational during the following periods:

October 7-10 for Area C valve box installation.

October 17 for computer maintenance.

October 24-25 for Area C instrumentation troubleshooting and computer maintenance.

Computer maintenance consists of hard drive optimization, alarm file archive and compression and file backup.

The process water was sampled October 2 and 17, 1996. Sample results are included.

0.169 pounds of PCE was removed during this period. The total amount of PCE removed to date is 0.649 pounds.

Calculation:

Avg. PCE concentration = 11.7 ug/l

Pounds of PCE removed = (39 g/m)(60 min/hr)(744 hr)(11.7 ul/l)(3.785 l/g) (g/1,000,000)
(lb/454g)= 0.169 pounds of PCE.

November 1996

The water treatment plant effluent averaged 16.7 g.p.m. for the month of November 1996. The process effluent averaged 50 g.p.m. excluding down time. 7,599,346 gallons have been treated as of November 30, 1996.

The water treatment plant was partially operational during November 1996. The following list details situations encountered and repairs made.

November 1 through November 10, 1996

Water treatment plant running. The process water was sampled November 6, 1996. Sample results are included.

Monday, 11 November 1996.

System down upon arrival (0600 hrs). Two problems were noticed:

1. An AlarmWorks+ software error occurred Saturday, 9 November 1996 according to the error message on the computer screen. There was also an AlarmWorks+ database corruption error message.

The following was done:

- The AlarmWorks+ alarm files were archived and compacted.
- The hard drive was scanned and optimized via Norton Disk Doctor software
- AlarmWorks+ version 3.02 was installed. This version should take care of some software errors as per the software developers.

2. Found computer card AC-1 not responding. This is a digital to analog converter. It takes digital information from the computer and sends a milliamp output to a field device.

The devices working off AC-1 are the Area A+C flow control valves and both variable speed drive equalization tank pumps. When this card does not operate, no signal is sent to the flow control valves so they close and the variable speed drives run at their maximum rate.

The result seen in the field was a high high level in the transfer vault (Area C) and a low low level in the equalization tank.

The flow control valve was opened manually and one transfer vault pump (#39) was manually activated. A new computer card was ordered and the plant was put into semi-automatic operation.

Semi-automatic operation consists of the Area C flow control valve manually set open and a plug valve after the equalization tank pumps manually closed until the flow meter indicates 50 g.p.m. All remaining systems operate normally.

The system ran in this manner all afternoon and was left overnight running in semi-automatic mode.

Tuesday, 12 November 1996

System down upon arrival (0600 hrs). The equalization tank was at low low level and the Area C transfer vault was at high high level.

The Area C transfer pump #39 breaker was tripped. After resetting, the breaker immediately tripped. The second transfer vault pump (#40) was activated and pumped the vault

down. The well pumps were manually shut down. Once the vault was pumped down, the water level in the transfer vault was seen rising. The check valves in the valve box were investigated and a piece of plastic was found. This kept the valve from seating and allowed the carrier pipe to drain back into the vault until an equilibrium was found. The transfer vault pump #39 was checked closely for the reason it tripped. Apparently, the water rose to the level of the electrical connection (due to the plastic in the check valve) and it shorted. The connection transfer vault pump #40 was investigated and it showed signs of moisture. New connections were then ordered for each pump. The treatment plant remained off until the connections were replaced.

Wednesday, 13 November 1996

The electrical connections were replaced. The replacement computer card had not arrived. The system was run in semi-automatic mode at 50 g.p.m. starting at 1520 hrs. Pump 40 in the transfer vault was online.

Thursday, 14 November 1996

System shut itself down somewhere around 1900 hrs Wednesday night. The alarm printer had jammed so exact time and initial problem was not recorded. Upon investigation, Area C transfer vault had hit high high level. Transfer vault pump #40 breaker had tripped. This required a minor adjustment on the starter heater overload component and all systems were running again.

0945 hrs. Extraction well 17 was shown on the computer screen to have failed. The pump was checked in the field and was operating properly.

Noticed that not all alarms are going to the printer. Alarms seem to be divided between the printer and the monitor.

The system was shut down at 1500 hrs. I was scheduled to be offsite Friday and did not have confidence the system would run for an extended period of time.

Monday, 18 November 1996

The replacement computer card arrived at 1016 hrs. The card was replaced and the computer restarted at 1100 hrs. The alarm files were archived and compacted. The hard drive was scanned using Norton Utilities and a message came up indicating the hard drive was damaged and to run the Disk Doctor program. The Disk Doctor program was unable to correct the problem. Norton technical support was contacted and the situation described. They recommended reformatting the hard drive. The CMCS subcontractor was notified and asked for assistance and a second opinion. They recommended contacting the computer manufacturer. By this time it was too late to continue and the system was left off for the night.

Tuesday, 19 November 1996

The system was restarted as is at 0600 hrs. Extraction well 17 shown correctly this time on the monitor. The computer then gave a hard drive error message. Tried Norton Disk Doctor again but it did not help. Comark, the computer manufacturer had opened by this time and was called. The situation was discussed and I found out that the computer warranty was still in effect. I decided to send the computer back for repair and had an empty box shipped to the site. I was informed they would not be able to ship the box out until Wednesday but it would go out with overnight delivery.

Thursday, 21 November 1996

The computer box had not arrived by 1000 hrs. Comark was called and they indicated it was not shipped, however, it would be shipped today.

Friday, 22 November 1996

The empty computer box arrived, the computer was disconnected, packed up and shipped. Comark is not open Saturdays to take weekend deliveries.

Monday, 25 November 1996

Comark was called in order to make sure the computer had arrived in good condition. The computer had arrived undamaged and they will begin looking at it today.

Wednesday, 27 November 1996

Comark was contacted for a status update. The technician fixing our computer was off and our account contact (Sandy Schott) was out of the office Monday and Tuesday and had not talked with Carl (the technician). Sandy said she would call Monday with an update.

Note: The hard drive was repaired and five I/O boards were either rebuilt or repaired in December. The computer arrived back onsite 10 December 1996.

OHM will provide a detailed failure analysis as well as correction recommendations to the current CMCS installation.

0.058 pounds of PCE was removed during the November period. The total amount of PCE removed to date is 0.707 pounds.

Calculation:

Avg. PCE concentration = 9.65 ug/l

Pounds of PCE removed = $(16.7 \text{ g/m})(60 \text{ min/hr})(720 \text{ hr})(9.65 \text{ ul/l})(3.785 \text{ l/g}) (\text{g}/1,000,000)$
 $(\text{lb}/454\text{g}) = 0.058 \text{ pounds of PCE.}$

Please contact me at (609) 588-6348 if you have any questions.

Sincerely,



Philip A. Tully, P.E.
Project Manager

Distribution List with Attachments:

**Lonnie Monaco-NorthDiv
Nancy Crickman-PADEP
Tom Ames-NAWCAD Warminster
Frank Kurdziel-NAWCAD Warminster
Dave Fennimore-Earth Data Inc.
Mike Hunter-NAWCAD Warminster
Ernest Beatty-NAWCAD Warminster
Dave Kennedy-PADEP
Darius Ostrauskas-EPA
Al Wills-Bucks County Dept. of Health
Dave Leadenham-OHM
Gary R.Kowalski-OHM
OHM Project File 16292**

Warminster NAWC Treatment Plant Sampling Results

Reporting Period Sample Date	August 1-15 8-7-96	August 16-31 8-21-96	Sept. 1-15 9-4-96	Sept. 16-30 9-18-96	Oct. 1-15 10-2-96	Oct. 16-31 10-17-96	November 11-6-96
Area 'C' Influent							
pH	7.57	7.32	8.15	7.87	7.57	7.47	7.55
Total Sus. Solids mg/l	110	34	43	5	68	8	48
Equalization Tank Effluent							
pH	7.6	7.02	7.75	7.61	8.51	7.83	7.42
T. O. C., mg/l	bdl	2.8	4.1	1.6	3.7	1.7	3.9
Total Sus. Solids mg/l	18	bdl	bdl	bdl	bdl	6	5
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Copper	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Lead	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Zinc	190	130	150	110	130	190	150
Arsenic	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Chromium+6, mg/l	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Aluminum	bdl	bdl	130	bdl	bdl	100	150
Total Iron	500	270	13900	360	bdl	6700	490
Dissolved Iron	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Total Manganese	7	5.7	11	bdl	bdl	47	13
Mercury	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Carbon Tetrachloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Tetrachloroethene	13.1	12.8	10.6	9.62	10.7	12.7	9.65
Trichloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Vinyl Chloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
1,1 Dichloroethylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Clarifier Effluent							
Total Sus. Solids mg/l	bdl	13	bdl	bdl	bdl	bdl	bdl
Sand Filter Effluent							
pH	7.82	6.98	7.96	7.89	8.49	7.76	7.51
Total Sus. Solids mg/l	bdl	bdl	6	bdl	bdl	5	bdl
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Copper	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Lead	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Zinc	160	150	160	110	130	180	140
Arsenic	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Chromium+6, mg/l	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Aluminum	130	170	bdl	bdl	bdl	bdl	bdl
Total Iron	bdl	300	bdl	1800	bdl	bdl	200
Dissolved Iron	bdl	bdl	360	bdl	bdl	bdl	bdl
Total Manganese	6.4	0.5	bdl	8.3	bdl	bdl	7.5
Mercury	bdl	bdl	bdl	bdl	bdl	bdl	bdl

Warminster NAWC Treatment Plant Sampling Results

Reporting Period Sample Date	August 1-15 8-7-96	August 16-31 8-21-96	Sept. 1-15 9-4-96	Sept. 16-30 9-18-96	Oct. 1-15 10-2-96	Oct. 16-31 10-17-96	November 11-6-96
Air Stripper Effluent							
Carbon Tetrachloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Tetrachloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Trichloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Vinyl Chloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
1,1 Dichloroethylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Carbon Midfluent							
T. O. C., mg/l	not taken	not taken	1.2	2	3.8	1.6	2.2
Carbon Tetrachloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Tetrachloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Trichloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Vinyl Chloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
1,1 Dichloroethylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Plant Effluent							
Total Discharge, gal.	3,151,536	3,934,102	4,672,216	5,532,602	6,277,879	6,879,152	7,599,346
Average Flow, gpm	40	33.9	34.17	39.83	34.5	26.1	16.67
pH	7.98	7.65	8.5	8.03	8.25	7.97	8.04
T. O. C., mg/l	3.5	not taken	1.5	1.2	2	1.6	1.7
Total Sus. Solids mg/l	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Copper	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Lead	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Zinc	140	61	110	67	72	92	100
Arsenic	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Chromium+6, mg/l	broken	bdl	bdl	bdl	bdl	bdl	bdl
Aluminum	100	bdl	bdl	bdl	bdl	bdl	110
Total Iron	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Dissolved Iron	bdl	bdl	bdl	130	bdl	bdl	bdl
Total Manganese	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Mercury	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Carbon Tetrachloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Tetrachloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Trichloroethene	bdl	bdl	bdl	bdl	bdl	bdl	bdl
Vinyl Chloride	bdl	bdl	bdl	bdl	bdl	bdl	bdl
1,1 Dichloroethylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl

Note: All units are ug/l unless shown otherwise.

ETC

**DATA MANAGEMENT SUMMARY REPORT
(DM-OC) - All Parameters Tested, Selected Samples**

DATE: 10/14/96
PAGE: 1

Chain of Custody Data Required for ETC Data Management Summary Report				
See Below	DM REMEDIATION SERVICES CORP	NAME	See Below	
ETC Sample No	Company	Facility	Sample Point	Date

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No.'s							
		AIRSTRIP P 961002 BSC499	AIRACIN P 961002 BSC498	EQUITANK P 961002 BSC401	EQUITANK P 961002 BSC402	INCLPLAISE P 961002 BSC403	LEADCARBON 961002 BSC406	SAND FILTER 961002 BSC404	SAND FILTER 961002 BSC405
Priority Poll. Volatiles GC/MS									
Carbon tetrachloride	ug/l	< .4	-	< .4	-	-	< .4	-	-
1,1-Dichloroethylene	ug/l	< .4	-	< .4	-	-	< .4	-	-
Tetrachloroethylene	ug/l	< .2	-	10.7	-	-	< .2	-	-
Trichloroethylene	ug/l	< .2	-	< .2	-	-	< .2	-	-
Vinyl chloride	ug/l	< .2	-	< .2	-	-	< .2	-	-
Metals Analysis Data									
Aluminum	ug/l	-	-	J 61	-	-	-	J 51	-
Arsenic	ug/l	-	-	< 8.0	-	-	-	< 8.0	-
Cadmium	ug/l	-	-	< 4.0	-	-	-	J < .80	-
Copper	ug/l	-	-	< 10	-	-	-	J 10	-
Iron	ug/l	-	-	J 99	J 24	-	-	J < 87	< 100
Lead	ug/l	-	-	< 5.0	-	-	-	J 5.0	-
Manganese	ug/l	-	-	J 3.7	-	-	-	J 3.9	-
Mercury	ug/l	-	-	< .20	-	-	-	< .20	-
Zinc	ug/l	-	-	130	-	-	-	130	-
Groundwater Conventionals									
Total Organic Carbon	ng/l	-	-	3.6	-	-	3.8	-	-
Total Organic Carbon	ng/l	-	-	3.8	-	-	3.9	-	-
pH	std	-	7.58	8.52	-	-	-	8.49	-
pH	std	-	7.57	8.50	-	-	-	8.50	-
Miscellaneous Parameters									
Chromium, Hexavalent	ng/l	-	-	< .01	-	-	-	< .01	-
Solids, total suspended	ng/l	-	68	< 5	-	< 5	-	< 5	-

Footnotes: BMOL=Below Method Detection Limit ND=Parameter not detected *-Parameter not tested J=BMOL(Value Reported) <=ND(MDL Reported)

OCT 14 '96 05:58PM CORE LABORATORIES NJ P.3/4

ETC

**DATA MANAGEMENT SUMMARY REPORT
(DM-OC) - All Parameters Tested, Selected Samples**

DATE: 10/14/96
PAGE: 2

Chain of Custody Data Required for ETC Data Management Summary Report				
See Below	DM REMEDIATION SERVICES CORP	NAH	See Below	
ETC Sample No.	Company	Facility	Sample Point	Date

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No's						
		TRIPLET 961002 BSC407	TRIPLET 961002 BSC408					
Priority Poll. Volatiles GC/MS								
Carbon tetrachloride	ug/l	<	.4	-				
1,1-Dichloroethylene	ug/l	<	.4	-				
Tetrachloroethylene	ug/l	<	.2	-				
Trichloroethylene	ug/l	<	.2	-				
Vinyl chloride	ug/l	<	.2	-				
Metals Analysis Data								
Aluminum	ug/l	J	75	-				
Arsenic	ug/l	<	8.0	-				
Cadmium	ug/l	<	4.0	-				
Copper	ug/l	<	10	-				
Iron	ug/l	J	24	<	100			
Lead	ug/l	<	5.0	-				
Manganese	ug/l	J	1.9	-				
Mercury	ug/l	<	.20	-				
Zinc	ug/l		72	-				
Groundwater Conventionals								
Total Organic Carbon	mg/l		2.0	-				
Total Organic Carbon	mg/l		2.0	-				
pH	std		8.25	-				
pH	std		8.24	-				
Miscellaneous Parameters								
Chromium, Hexavalent	mg/l	<	.01	-				
Solids, total suspended	mg/l	<	5	-				

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected J=Parameter not tested J=BMDL(Value Reported) <=ND(MDL Reported)

OCT 14 '96 05:59PM CORE LABORATORIES NJ

P.4/4



CORE LABORATORIES, INC.

No. 54007

409542 CHAIN OF CUSTODY RECORD

OCT 14 '96 05:57PM CORE LABORATORIES NJ

P.2/4

CUSTOMER INFORMATION		PROJECT INFORMATION					NUMBER OF CONTAINERS	ANALYSIS / METHOD REQUEST						REMARKS / PRECAUTIONS	
COMPANY: OHM Remediation Services		PROJECT NAME/NUMBER: NAMC116292						TSS	pH	Halogens	Total Metals	P-Solvent Metals	TDC		Cr/6
SEND REPORT TO: Gary Kowalski		BILLING INFORMATION												LAB JOB NO. NAME	
ADDRESS: c/o NAWF		BILL TO: OHM Remediation Services													
PHONE: 215-441-4610		ADDRESS: P.O. Box 4647													
FAX: 215-441-5403		Trenton, NJ 08650													
PHONE: 215-441-4610		PHONE:													
FAX: 215-441-5403		PO NO.: 1024996													
SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV.							REMARKS / PRECAUTIONS		
BSC400	AREACINFL	10/2/96	1150	Water	MIX		1	X	X						Area C Influent
BSC401-422	EQUILTANKEF	10/2/96	1145	Water			8	X	X	X	X	X	X		Equalization Tank
BSC403	INCPLATSEP	10/3/96	1140	Water			1	X							Inclined Plate Sep.
BSC404-405	SANDFILTEF	10/2/96	1125	Water			4	X	X	X	X	X	X		Sand Filter Effluent
BSC406	LEADCARBON	10/2/96	1115	Water			4		X						Lead Carbon Cell
BSC407-408	TRIPLTEFF	10/2/96	1100	Water			8	X	X	X	X	X	X		Treatment Plant Eff.
BSC409	AIRSTRPEFF	10/2/96	1110	Water			3		X						Air Stripper Effl.
BSC410	TRIPBLANK			Water					X						Tripblank Empty

SAMPLER: Brian M. Flanagan SHIPMENT METHOD: Fed Ex Courier AIRBILL NO. 5676990362

REQUIRED TURNAROUND: SAME DAY 24 HOURS 48 HOURS 72 HOURS 5 DAYS 10 DAYS ROUTINE OTHER

1. RELINQUISHED BY: <u>Brian M. Flanagan</u>		DATE: <u>10/2/96</u>	2. BELONGING TO: _____		DATE: _____	3. RECEIVED BY: _____		DATE: _____
SIGNATURE: <u>Brian M. Flanagan</u>		TIME: <u>11:55</u>	SIGNATURE: _____		TIME: _____	SIGNATURE: _____		TIME: _____
PRINTED NAME/COMPANY: <u>Brian M. Flanagan OHM Corp</u>		DATE: _____	PRINTED NAME/COMPANY: _____		DATE: _____	PRINTED NAME/COMPANY: _____		DATE: _____
1. RECEIVED BY: <u>Shirley...</u>		DATE: <u>10/3/96</u>	2. RECEIVED BY: _____		DATE: _____	3. RECEIVED BY: _____		DATE: _____
SIGNATURE: <u>Shirley...</u>		TIME: <u>10:41</u>	SIGNATURE: _____		TIME: _____	SIGNATURE: _____		TIME: _____
PRINTED NAME/COMPANY: <u>CORE/N.J.</u>		DATE: _____	PRINTED NAME/COMPANY: _____		DATE: _____	PRINTED NAME/COMPANY: _____		DATE: _____

- * RUSH TURNAROUND MAY REQUIRE SURCHARGE
- Anaheim, California
1250 E. Gene Aubry Way
Anaheim, California 92805
(714) 937-1094
(800) 404-2873
 - Aurora (Denver), Colorado
10703 E. Anthony Drive
Aurora, Colorado 80014
(303) 751-1780
(800) 972-2973
 - Casper, Wyoming
420 West 1st Street
Casper, Wyoming 82501
(307) 235-5741
(800) 666-9306
 - Corpus Christi, Texas
1733 North Padre Island Drive
Corpus Christi, Texas 78408
(512) 299-2613
(800) 548-8728
 - Houston, Texas
8210 Alondra Road
Houston, Texas 77025
(713) 943-9776
(800) 734-2673
 - Lake Charles, Louisiana
3845 Bogie Parkway
Sulphur, Louisiana 70663
(337) 583-4826
(800) 259-4926
 - Long Beach, California
3700 Cherry Avenue
Long Beach, California 90807
(310) 595-8401
(800) 814-3433

EPISOM NJ

ETC

**DATA MANAGEMENT SUMMARY REPORT
(DM-OC) - All Parameters Tested, Selected Samples**

DATE: 10/30/96
PAGE: 1

Chain of Custody Data Required for ETC Data Management Summary Report

See Below: OHM REMEDIATION SERVICES CORP NAME See Below
ETC Sample No: Company Facility Sample Point Date

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No's							
		AIRSTRIPE/F 961017 BS1609	AREAC/INF 961017 BS1600	EQUITANK/F 961017 BS1601	EQUITANK/F 961017 BS1602	INCPLATSE/F 961017 BS1603	LEADCARBON 961017 BS1606	SANDFILTER/F 961017 BS1604	SANDFILTER/F 961017 BS1605
Priority Poll. Volatiles GC/MS									
Carbon tetrachloride	ug/l	< .4	-	< .4	-	-	< .4	-	-
1,1-Dichloroethylene	ug/l	< .4	-	< .4	-	-	< .4	-	-
Tetrachloroethylene	ug/l	< .2	-	12.7	-	-	< .2	-	-
Trichloroethylene	ug/l	< .2	-	< .2	-	-	< .2	-	-
Vinyl chloride	ug/l	< .2	-	< .2	-	-	< .2	-	-
Metals Analysis Data									
Iron	ug/l	-	-	-	< 100	-	-	-	< 100
Groundwater Conventionals									
Total Organic Carbon	mg/l	-	-	1.5	-	-	1.5	-	-
Total Organic Carbon	mg/l	-	-	1.7	-	-	1.6	-	-
pH	std	-	7.45	7.82	-	-	-	7.74	-
pH	std	-	7.47	7.83	-	-	-	7.76	-
Miscellaneous Parameters									
Aluminum, Total	ug/l	-	-	100	-	-	-	J 48	-
Arsenic, Total	ug/l	-	-	< 8.0	-	-	-	J 2.0	-
Cadmium, Total	ug/l	-	-	< 4.0	-	-	-	< 4.0	-
Chromium, Hexavalent	ug/l	-	-	< 25	-	-	-	< 25	-
Copper, Total	ug/l	-	-	< 10	-	-	-	< 10	-
Iron, Total	ug/l	-	-	6700	-	-	-	J 61	-
Lead, Total	ug/l	-	-	J 2.7	-	-	-	J 3.0	-
Manganese, Total	ug/l	-	-	47	-	-	-	J 4.6	-
Mercury, Total	ug/l	-	-	< .20	-	-	-	< .20	-
Solids, total suspended	mg/l	-	8	6	-	5	-	5.0	-
Zinc, Total	ug/l	-	-	190	-	-	-	180	-

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected *-Parameter not tested J=BMDL(Value Reported) <=MD(MDL Reported)

ETC

**DATA MANAGEMENT SUMMARY REPORT
(DM-OC) - All Parameters Tested, Selected Samples**

DATE: 10/30/96
PAGE: 2

<i>Chain of Custody Data Required for ETC Data Management Summary Report</i>				
See Below	OHM REMEDIATION SERVICES CORP.	NANF	See Below	
ETC Sample No.	Company	Facility	Sample Point	Date

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No's					
		TRIPLE BLANK 961017 BS1610	TRIPLE FF 961017 BS1607	TRIPLE FF 961017 BS1608			
Priority Poll. Volatiles GC/MS							
Carbon tetrachloride	ug/l	< .4	< .4	-			
1,1-Dichloroethylene	ug/l	< .4	< .4	-			
Tetrachloroethylene	ug/l	< .2	< .2	-			
Trichloroethylene	ug/l	< .2	< .2	-			
Vinyl chloride	ug/l	< .2	< .2	-			
Metals Analysis Data							
Iron	ug/l	-	-	< 100			
Groundwater Conventionals							
Total Organic Carbon	mg/l	-	1.6	-			
Total Organic Carbon	mg/l	-	1.6	-			
pH	std	-	7.96	-			
pH	std	-	7.97	-			
Miscellaneous Parameters							
Aluminum, Total	ug/l	-	J 61	-			
Arsenic, Total	ug/l	-	J 3.2	-			
Cadmium, Total	ug/l	-	< 4.0	-			
Chromium, Hexavalent	ug/l	-	< 25	-			
Copper, Total	ug/l	-	< 10	-			
Iron, Total	ug/l	-	< 100	-			
Lead, Total	ug/l	-	< 5.0	-			
Manganese, Total	ug/l	-	J 2.0	-			
Mercury, Total	ug/l	-	< .20	-			
Solids, total suspended	mg/l	-	< 5	-			
Zinc, Total	ug/l	-	92	-			

Footnotes: SMDL=Below Method Detection Limit ND=Parameter not detected J=Parameter not tested J=BMDL(Value Reported) <=ND(MDL Reported)



CORE LABORATORIES, INC.

No. 54011

409633 CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION		PROJECT INFORMATION					NUMBER OF CONTAINERS	ANALYSIS / METHOD REQUEST								LAB JOB NO. NAWF
COMPANY: OHM Remediation Services		PROJECT NAME/NUMBER: NAWC116292						TDS	pH	Heavy Metals	Total Metals	Dissolved Iron	TDC	Cr+6	Fiber Includ	
SEND REPORT TO: Gary Kowalski		BILLING INFORMATION														
ADDRESS: c/o NAWF		BILL TO: OHM Remediation Services ADDRESS: P.O. Box 4647 Trenton, NJ 08650														
PHONE: 215-441-4610		PHONE:					REMARKS / PRECAUTIONS									
FAX: 215-441-5403		FAX: PO NO. 1024996														
SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV.										
BSI600	AREACTFL	10/17	11:55	Water	MIX		1	X	X						Area C Influent	
BSI601/2	EQUILTANKEF	10/17	11:50	Water			8	X	X	X	X	X	X		Equalization Tank	
BSI603	INCLPLATSEP	10/17	11:40	Water			1	X							Inclined Plate Sep.	
BSI604/S	SANDFILTEF	10/17	11:30	Water			4	X	X	X	X	X	X		Sand Filter Effluent	
BSI606	LEADCARBON	10/17	11:15	Water			4			X		X			Lead Carbon Cell	
BSI607/B	TRTPLTEFF	10/17	11:00	Water			8	X	X	X	X	X	X		Treatment Plant Effl.	
BSI609	AIRSTRPEFF	10/17	11:20	Water			3			X					Air Stripper Effl.	
BSI610	TRIPBLANK			Water						X					Tripblank	
SAMPLER: Brian M. Flanagan		SHIPMENT METHOD:					AIRBILL NO. 5676990362									
REQUIRED TURNAROUND*		<input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HOURS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> 72 HOURS <input checked="" type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS <input type="checkbox"/> ROUTINE <input type="checkbox"/> OTHER														
1. RELINQUISHED BY:		DATE	2. RELINQUISHED BY:		DATE	3. RELINQUISHED BY:								DATE		
SIGNATURE: Brian M. Flanagan		10/17/96	SIGNATURE:			SIGNATURE:										
PRINTED NAME/COMPANY: Brian M. Flanagan OHM Corp		TIME: 11:05	PRINTED NAME/COMPANY:		TIME:	PRINTED NAME/COMPANY:								TIME:		
1. RECEIVED BY:		DATE	2. RECEIVED BY:		DATE	3. RECEIVED BY:								DATE		
SIGNATURE: [Signature]		10/18/96	SIGNATURE:			SIGNATURE:										
PRINTED NAME/COMPANY: CORE I.N.J.		TIME: 12:40	PRINTED NAME/COMPANY:		TIME:	PRINTED NAME/COMPANY:								TIME:		

* RUSH TURNAROUND MAY REQUIRE SURCHARGE

Anaheim, California
1250 E. Gene Aubrey Way
Anaheim, California 92805
(714) 937-1094
(800) 404-2673

Aurora (Denver), Colorado
10703 E. Bethany Drive
Aurora, Colorado 80014
(303) 751-1780
(800) 972-2673

Casper, Wyoming
420 West 1st Street
Casper, Wyoming 82601
(307) 236-5741
(800) 686-0306

Corpus Christi, Texas
1733 North Padre Island Drive
Corpus Christi, Texas 78408
(512) 289-2673
(800) 548-8228

Houston, Texas
8210 Mayfield Road
Houston, Texas 77075
(713) 943-8776
(800) 734-2573

Lake Charles, Louisiana
3645 Beglis Parkway
Sulphur, Louisiana 70663
(318) 583-4926
(800) 259-4926

Long Beach, California
3700 Cherry Avenue
Long Beach, California 90801
(310) 595-8401
(800) 814-3433

OCT 30 '96 10:26AM CORE LABORATORIES NJ

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ETC

DATA MANAGEMENT SUMMARY REPORT (DM-OC) - All Parameters Tested, Selected Samples

DATE: 11/14/96
PAGE: 1

Chain of Custody Data Required for ETC Data Management Summary Report			
See Below ETC Sample No.	OIM REMEDIATION SERVICES CORP. Company	NAM Facility	See Below Sample Point Date

Parameters	Units	Sample Points, Sampling Dates, and ETC Sample No.'s							
		AIRSTRIPPER 961106 BS1709	AREALINE1 961106 BS1708	EQUITANKET 961106 BS1701	EQUITANKET 961106 BS1702	INCPLATSER 961106 BS1703	LEADCARBON 961106 BS1706	SANDFILTER 961106 BS1704	SANDFILTER 961106 BS1705
Priority Poll. Volatiles GC/MS									
Carbon tetrachloride	ug/l	< .4	-	< .4	-	-	< .4	-	-
1,1-Dichloroethylene	ug/l	< .4	-	< .4	-	-	< .4	-	-
Tetrachloroethylene	ug/l	< .2	-	9.65	-	-	< .2	-	-
Trichloroethylene	ug/l	< .2	-	< .2	-	-	< .2	-	-
Vinyl chloride	ug/l	< .2	-	< .2	-	-	< .2	-	-
Metals Analysis Data									
Aluminum	ug/l	-	-	150	-	-	-	J 74	-
Arsenic	ug/l	-	-	J 2.7	-	-	-	< 8.0	-
Cadmium	ug/l	-	-	< 4.0	-	-	-	< 4.0	-
Copper	ug/l	-	-	< 10	-	-	-	< 10	-
Iron	ug/l	-	-	490	< 100	-	-	200	< 100
Lead	ug/l	-	-	< 5.0	-	-	-	< 5.0	-
Manganese	ug/l	-	-	13	-	-	-	7.5	-
Mercury	ug/l	-	-	< .20	-	-	-	< .20	-
Zinc	ug/l	-	-	150	-	-	-	140	-
Groundwater Conventionals									
Total Organic Carbon	mg/l	-	-	3.9	-	-	2.1	-	-
Total Organic Carbon	mg/l	-	-	3.9	-	-	2.2	-	-
pH	std	-	7.52	7.41	-	-	-	7.51	-
pH	std	-	7.54	7.42	-	-	-	7.51	-
Miscellaneous Parameters									
Chromium, Hexavalent	ug/l	-	-	< 25	-	-	-	< 25	-
Solids, total suspended	mg/l	-	48	5	-	< 5	-	< 5	-

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected -/=Parameter not tested J=BMDL(Value Reported) <=ND(MDL Reported)

NOV 14 '96 04:22PM CORE LABORATORIES NJ

ETC

**DATA MANAGEMENT SUMMARY REPORT
(DM-OC) - All Parameters Tested, Selected Samples**

DATE: 11/14/96
PAGE: 2

Chain of Custody Data Required for ETC Data Management Summary Report

See Below ETC Sample No.	DM REMEDIATION SERVICES CORP Company	TNAF Facility	See Below Sample Point
			Date

Parameters	Units	Sample Point, Sampling Dates, and ETC Sample No's						
		TRIPBLANK 961106 BS1710	TRIPLEFT 961106 BS1707	TRIPLEFT 961106 BS1708				
Priority Poll. Volatiles GC/MS								
Carbon tetrachloride	ug/l	< .4	< .4	-				
1,1-Dichloroethylene	ug/l	< .4	< .4	-				
Tetrachloroethylene	ug/l	< .2	< .2	-				
Trichloroethylene	ug/l	< .2	< .2	-				
Vinyl chloride	ug/l	< .2	< .2	-				
Metals Analysis Data								
Aluminum	ug/l	-	110	-				
Arsenic	ug/l	-	< 8.0	-				
Cadmium	ug/l	-	< 4.0	-				
Copper	ug/l	-	< 10	-				
Iron	ug/l	-	< 100	< 100				
Lead	ug/l	-	< 1.6	-				
Manganese	ug/l	-	< 5.0	-				
Mercury	ug/l	-	< .20	-				
Zinc	ug/l	-	100	-				
Groundwater Conventional								
Total Organic Carbon	mg/l	-	1.6	-				
Total Organic Carbon	mg/l	-	1.7	-				
pH	std	-	8.03	-				
pH	std	-	8.04	-				
Miscellaneous Parameters								
Chromium, Hexavalent	ug/l	-	< 25	-				
Solids, total suspended	mg/l	-	< 5	-				

Footnotes: BMDL=Below Method Detection Limit; NE=Parameter not detected; *J=Parameter not tested; J=BMDL (Value Reported); B<=MDL (MDL Reported)



CORE LABORATORIES, INC.

No. 54006

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION			PROJECT INFORMATION				NUMBER OF CONTAINERS	ANALYSIS / METHOD REQUEST							LAB JOB NO. NAWF
COMPANY OHM Remediation Services			PROJECT NAME/NUMBER HANC116292					TSS	PH	Halogenated Vols	Total Metals	Dissolved Iron	TOC	Cr/6	
SEND REPORT TO: Gary Kowalski			BILLING INFORMATION												
ADDRESS: c/o NAWF			BILL TO: OHM Remediation Services ADDRESS: P.O. Box 4647 Trenton, NJ 08650												
PHONE: 215-441-4610			PHONE:				REMARKS / PRECAUTIONS								
FAX: 215-441-5403			FAX: PO NO.: 1024996												
SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	PRESERV.									
BSI700	AREACINFL	11/6/96	1256	Water	Plastic	No	X	X						Area C Influent	
BSI701-702	EQUALTANKEF	11/6/96	1250	Water	Plastic	Yes	X	X	X	X	X	X	X	Equalization Tank	
BSI703	INCLATSEP	11/6/96	1244	Water	Plastic	No	X							Inclined Plate Sep.	
BSI704-705	SANDFILTEF	11/6/96	1240	Water	Plastic	Yes	X	X	X	X	X	X	X	Sand Filter Effluent.	
BSI706	LEADCARBON	11/6/96	1231	Water	VOA	Yes			X		X			Lead Carbon Cell	
BSI707-908	TRIPLEFF	11/6/96	1218	Water	VOA/Plastic	Yes	X	X	X	X	X	X	X	Treatment Plant Effl.	
BSI709	AIRSTRPEFF	11/6/96	1225	Water	VOA	Yes			X					Air Stripper Effl.	
BSI710	TRIPBLANK			Water					X					Tripblank	

Handwritten note: *See'd on order Sample*

SAMPLER: *Gary R. Kowalski* SHIPMENT METHOD: *FED. EXPRESS* AIRBILL NO.: *9535708582*

REQUIRED TURNAROUND: SAME DAY 24 HOURS 48 HOURS 72 HOURS 5 DAYS 10 DAYS ROUTINE OTHER

1. RELINQUISHED BY: SIGNATURE: <i>Gary R. Kowalski</i>	DATE: <i>11/7/96</i>	2. RELINQUISHED BY: SIGNATURE:	DATE:	3. RELINQUISHED BY: SIGNATURE:	DATE:
PRINTED NAME/COMPANY: <i>Gary R. Kowalski / OHM</i>	TIME:	PRINTED NAME/COMPANY:	TIME:	PRINTED NAME/COMPANY:	TIME:
1. RECEIVED BY: SIGNATURE: <i>W. Waldron</i>	DATE: <i>11/7/96</i>	2. RECEIVED BY: SIGNATURE:	DATE:	3. RECEIVED BY: SIGNATURE:	DATE:
PRINTED NAME/COMPANY: <i>W. Waldron Core Nf</i>	TIME: <i>11:00</i>	PRINTED NAME/COMPANY:	TIME:	PRINTED NAME/COMPANY:	TIME:

* RUSH TURNAROUND MAY REQUIRE SURCHARGE

- Anaheim, California
1250 E. Gene Autry Way
Anaheim, California 92805
(714) 937-1094
(800) 484-2673
- Aurora (Denver), Colorado
10703 E. Benbow Drive
Aurora, Colorado 80014
(303) 751-1780
(800) 972-2673
- Casper, Wyoming
420 West 1st Street
Casper, Wyoming 82601
(307) 238-5741
(800) 656-0305
- Corpus Christi, Texas
1731 North Padre Island Drive
Corpus Christi, Texas 78408
(512) 283-2673
(800) 548-8228
- Houston, Texas
8210 Woodley Road
Houston, Texas 77075
(713) 943-9776
(800) 734-2673
- Lake Charles, Louisiana
3645 Eagles Parkway
Slusher, Louisiana 70663
(318) 583-4826
(800) 299-4326
- Long Beach, California
3700 Cherry Avenue
Long Beach, California 90807
(310) 595-5401
(800) 814-3433

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