

M00263.AR.000280
MCRD PARRIS ISLAND
5090.3a

EMAIL OF TRANSMITTAL AND UPDATED DATA FROM CHEMICAL OXIDATION PILOT
STUDY AT SITE 45 DRY CLEANING FACILITY SPILL AREA MCRD PARRIS ISLAND SC
1/3/2003
NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION

Sladic, Mark

From: Jones, Theresa (EFDSouth) [JonesTA@efdsouth.navy.mil]
Sent: Friday, January 03, 2003 8:52 AM
To: Jones, Theresa (EFDSouth); 'David Scaturo (E-mail)'; 'Robert H. Pope (E-mail)'; Sladic, Mark; 'Tim Harrington (E-mail)'; Sanford, Art (Efdsouth); 'David Keefer (E-mail)'; 'Don Hargrove (E-mail)'
Subject: RE: Parris Island SWMU 45 Updated Data



Analyticals B4 & After Chemox....
geochemical results_updateNov2..

Happy New Year! I hope everyone had a great holiday season.

Here's the latest and greatest on SWMU 45. Some of the wells are hotter this time, possibly due to migration of the hot spot or to sorption. We can discuss the path forward at our February team meeting.

Thanks,
Theresa

<<Analyticals B4 & After Chemox.xls>> <<geochemical results_updateNov2002.xls>>

> -----Original Message-----

> From: Jones, Theresa (EFDSouth)
> Sent: Monday, December 16, 2002 3:36 PM
> To: David Scaturo (E-mail); Robert H. Pope (E-mail); Mark Sladic
> (E-mail); Tim Harrington (E-mail); Sanford, Art (Efdsouth); David
> Keefer (E-mail); Don Hargrove (E-mail)
> Subject: Parris Island SWMU 45 Updated Data

> Good Afternoon!

> I just wanted to let everyone know that I haven't forgotten about
> sending out the updated data for SWMU 45. We haven't received it yet,
> but we should this week. When I get it, I will update the appropriate
> tables and forward them to you.

> Thanks,
> Theresa

> Theresa Jones, E.I.T.
> Environmental Engineer
> SouthDiv NAVFAC
> Post Office Box 190010
> N. Charleston, SC 29419
> Phone: (843) 820-7386
> Fax: (843) 820-5563

MCRD Parris Island
 Site 45
 Chemical Oxidation Pilot Study

Location ID	Sample Date	Chemical Name Unit	1,1-DICHLOROETHANE ug/L	1,1-DICHLOROETHYLENE ug/L	1,2,4-TRIMETHYLBENZENE ug/L	Cis-1,2-dichloroethene ug/L	METHYLBENZENE ug/L	p-Isopropyltoluene ug/L	TETRACHLOROETHYLENE(PC) ug/L	TRANS-1,2-DICHLOROETHENE ug/L	TRICHLOROETHYLENE ug/L	VINYL CHLORIDE ug/L	Total VOC's ug/L
AMW-02	3-Sep-02		< 1	< 1	< 1	220	< 1		97.0	14.2	79.5	38.3	449.0
AMW-02	28-Oct-02		< 1	< 1	< 1	112	< 1	< 1	116	7.4	66.6	49.5	351.5
AMW-03	28-Oct-02		16.2	1.0	27.3	624	16.7	< 1	239	29.0	170	242	1349
AMW-05	3-Sep-02		< 1	< 1	< 1	139	< 1		19.2	2.1	60.5	< 1	220.8
AMW-05	28-Oct-02		< 1	< 1	< 1	109	< 1	< 1	99.7	2.6	105	2.4	318.7
AW-01	3-Sep-02		< 1	< 1	< 1	1800	< 1		6570	13.4	2920	50.3	11353.7
AW-01	28-Oct-02		< 1	< 1	< 1	1.2	< 1	< 1	5.8	< 1	4.6	< 1	11.6
AW-02	3-Sep-02		< 1	5.2	< 1	31400	2.6		9660	160	14500	69.1	55649.9
AW-03	3-Sep-02		1.1	5.6	< 1	5760	13.8		10700	88.1	8100	776	25443.5
AW-03	28-Oct-02		< 1	< 1	< 1	203	1.1	< 1	246	5.1	209	17.4	681.6
AW-04 lower	3-Sep-02		< 1	< 1	< 1	52.8	< 1		35.4	1.4	91.4	< 1	181
AW-04 upper	28-Oct-02		< 1	< 1	< 1	3.7	< 1	< 1	< 1	< 1	< 1	< 1	3.7
MW-01D	3-Sep-02		< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	< 1
MW-01D	28-Oct-02		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-01S	3-Sep-02		< 1	< 1	< 1	< 1	< 1		< 1	< 1	< 1	< 1	< 1
MW-01S	28-Oct-02		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-08D	3-Sep-02		< 1	1.8	< 1	565	2.0		2200	44.0	993	43.4	3849.2
MW-08D	28-Oct-02		< 1	< 1	< 1	59.7	< 1	< 1	79.5	1.9	232	2.7	375.8
MW-08S	3-Sep-02		< 1	2.8	< 1	1360	2.3		2070	75.1	2290	135	5857.8
MW-08S	28-Oct-02		< 1	2.5	< 1	2490	3.8	< 1	6900	76.1	9100	219	18791.4

TABLE 1
SUMMARY OF GROUNDWATER GEOCHEMICAL DATA
MARINE CORP RECRUIT DEPOT
SITE 45
Parris Island

Sample Location	Sample Date	Methane (µg/L) ^v	Ethane (µg/L)	Ethene (µg/L)	TOC ^w (mg/L) ^w	Dissolved Oxygen (mg/L)	Dissolved Hydrogen (nM) ^v	Nitrate + Nitrite (mg/L)	Ferrous Iron (mg/L)	Manganese (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Total Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Chloride (mg/L)	Redox Potential (mV) ^v	pH (SU) ^v	Temperature (°C) ^v	Specific Conductivity (µs/cm) ^v	Depth to Water (BTOC) (ft.)	Intake Placement (ft. from TOC)	Pumping Rate (ml/min)
INJECTION WELLS																						
AW-1	3-Sep-02	BDL	BDL	0.26	NS	0.5	NS	6.0	<7.5	45	<0.1	70	245	16	309	5.66	3.6	28.6	399	0.85	5.5	104
	28-Oct-02				NS	<0.05	NS	>500	<7.5		<0.1	<10	<10			146	4.40	29.6	2,440	1.39	5.5	58
AW-2	3-Sep-02	21.5	0.1	0.54	NS	0.5	NS	8.0	<7.5	205	<0.1	110	70	209	20.6	6.41	28.4	1,478	1.65	9	76	
	28-Oct-02																				9	
AW-3	3-Sep-02	224.6	0.09	19.63	NS	0.3	NS	1.0	<7.5	45	<0.1	110	ND	247	96.8	9.85	26.2	430	3.61	9	102	
	28-Oct-02				NS	1.5	NS	NS	87.5	<7.5	<0.1	<10	<10			-151	6.56	28.6	4,490	2	9	72
AW-4 lower	3-Sep-02	402	0.02	0.12	NS	0.0	NS	7.5	<7.5	238	<0.1	125	155	1539		637	28.8	4,901	2.0	10	149	
AW-4 upper	28-Oct-02					4.5	NS	NS	112.5	NS	0.15	275	650			15	5.62	30.0	294		10	77
MONITORING WELLS																						
MW-01D	3-Sep-02	434.6	0.06	ND	NS	0.7	NS	2.5	<7.5	8	<0.1	100	112	14		605	29.7	270	1.2	13	51	
	28-Oct-02					0.7		2.5	<7.5		<0.1	100	112			-87	6.17	27.7	264	2.04	13	80
MW-01S	3-Sep-02	0.15	BDL	0.02	NS	1.5	NS	2.0	<7.5	33	<0.1	112	102	15		627	30.4	413	1.5	5	18	
	28-Oct-02				NS	0.5		1.5	<7.5		<0.1	130	110			32	6.22	27.8	464	1.9	5	82
MW-08S	3-Sep-02	149.1	0.02	0.32	NS	1.0	NS	1.0	<7.5	242	<0.1	60	225	29		79.4	28.4	396	2.0	6.5	88	
	28-Oct-02				NS	12.0	NS	NS	<0.1	<7.5	<0.1	70	240			179	5.64	27.0	372	2.05	6.5	83
MW-08D	3-Sep-02	0.07	0.01	0.05	NS	0.7	NS	2.5	<7.5	57	<0.1	45	240	25		512	28.8	286	1.7	13.5	89	
	28-Oct-02				NS	1.5	NS	NS	22.5		0.15	80	200			-49	5.74	25.7	400	1.97	13.5	76
AMW-2	3-Sep-02	215.0	0.1	0.53	NS	0.5	NS	9.0	<7.5	57	<0.1	80	750	24		559	31.0	430	2.29	10.25	104	
	28-Oct-02				NS	0.8	NS	NS	9.0	<7.5		<0.1	65	200		-15	5.70	28.0	389	1.53	10.25	72
AMW-3	NS																					
	28-Oct-02					0.6	NS	NS	11.5	<7.5	<0.1	80	260			-44	5.97	25.7	533	2.65	15.25	90
AMW-4	NS																					
	28-Oct-02				NS	3.5	NS	NS	1.5	<7.5	<0.1	100	190			124	6	24.55	920	1.94	10	50
AMW-5	3-Sep-02	26.1	0.03	0.2	NS	0.6	NS	NS	0.7	<7.5	163	<0.1	100	1000	163	93.3	6.49	29.3	1,066	1.6	7	85
	28-Oct-02				NS	1.0	NS	NS	2.0	<7.5	<0.1	250	70			27	6.80	27.2	121	2.33	7	87

^v µg/L = micrograms per liter.

^w TOC = total organic carbon.

^v mg/L = milligrams per liter.

^d nM = nano-Mol

^v mV = millivolts.

^v SU = pH standard units.

^v µs/cm = microsiemens per centimeter.

^v J indicates that the analyte was detected at a concentration above the method detection limit but below the reporting limit resulting in an estimated value.

^v NA = Not analyzed.

^v <20 indicates that the analyte was not detected above the referenced method detection limit.

^v Detect consists of 2.2 mg/L nitrite and 0.65 mg/L nitrate

^v High concentrations of nitrate reported at these is probably due to matrix interference related to high alkalinity concentrations and probably does not represent actual geochemical conditions