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TECHNICAL MEMORANDUM REGARDING THE REVIEW OF SOIL AND GROUNDWATER
INVESTIGATION DERIVED WASTE ANALYTICAL DATA FOR STUDY AREA 17 NTC
ORLANDO FL
7/20/1998
HARDING LAWSON ASSOCIATES

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Harding Lawson Associates

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MEMORANDUM

To: Orlando Partnering Team

From: G. Mudd, IR Tech Lead, HLA
R. Allen, Principal Scientist

Date: July 20, 1998

Subject: Review of Soil and Groundwater Investigation Derived Waste (IDW) Analytical Data
Study Area 17
Former Army Motor Pool, McCoy Annex

During the recently completed supplemental screening investigation at Study Area (SA) 17, a total of 18 permanent monitoring wells were installed to confirm the results of groundwater screening. The new monitoring wells were combined with three existing wells to form seven well clusters. Each cluster is comprised of a shallow (water table), intermediate, and deep well.

Soil IDW. All of the soil IDW generated during the installation of the new wells is currently being stored in sixty (60) 55-gallon drums. The drums are stored adjacent to each of the seven clusters. In order to characterize the IDW for disposal, each drum of soil that originated from the deep soil boring at each well cluster was screened for the presence of organic vapors using a flame ionization detector (FID). A sample was collected from the drum that indicated the highest vapor concentration. If none of the drums at a given cluster showed a measurable vapor concentration, a sample was collected at random. The seven soil samples (17Z002 through 17Z008) were submitted to an off-site laboratory for analysis of total volatile organic compounds using EPA Method 8260.

The results of the laboratory analysis are presented in Attachment A, which summarizes the compounds that were detected, and compares the concentrations against the Florida residential Soil Cleanup Goals (SCGs) and the Residential and Industrial Risk-Based Concentrations (RBCs) for surface soil. Samples 17Z002 and 17Z005 had no detections. Samples 17Z003, 17Z004, and 17Z006 detected only acetone, but at concentrations below screening criteria. Trichloroethene (TCE) was the only compound detected in sample 17Z007, at a concentration of 1 microgram/kilogram ($\mu\text{g}/\text{kg}$). This concentration is also below screening criteria.

The only sample that indicated significant contaminant concentrations was 17Z008. The compounds that exceeded screening criteria for surface soil were 1,2-dichloroethene (DCE) at $79 \mu\text{g}/\text{kg}$, methylene chloride at $130 \mu\text{g}/\text{kg}$, and TCE at $19,000 \mu\text{g}/\text{kg}$. HLA recommends that the drummed waste from this location (eight drums of soil) be treated as hazardous waste. The reasoning is as follows: if all the TCE is "leachable" by TCLP (with a 1:20 dilution), the TCLP extract would have about 1 ppm TCE, which would be twice the TCLP limit of 0.5 ppm.

Groundwater IDW. All of the water IDW at SA 17 is presently stored onsite in a 4,000 gallon Baker tank. The tank has been sampled and the analytical results (shown below) indicate that the water will likely be acceptable for disposal into the sanitary sewer system. HLA has written the City of Orlando requesting disposal into the sanitary sewer system.

Sample ID	TCLP Limits	FDEPG	Primary FEDMCL	17Z009
Sampling Date				7/1/98
Volatile Organics, ug/L				
Carbon tetrachloride	500	3	5	2.3 J
Chloroform	6000	6	100	1.8 J
Methylene chloride	ND	5	5	1.5 JB
1,1,1-Trichloroethane	ND	200	200	1.1 J
1,2-Dichloroethane	500	3	5	35
Tetrachloroethene	700	3	5	9.7
Trichloroethene	500	3	5	22

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ATTACHMENT A
SOIL ANALYTICAL RESULTS

Attachment A1. Summary of Detections in Soil Investigative Derived Waste Analytical Results
Study Area 17

Naval Training Center, Orlando
Orlando, FL

Sample ID Sampling Date	FL Residential SCG	RBC for		17Z003	17Z004	17Z006	17Z007	17Z008
		Residential Soil	Industrial Soil					
Volatile Organics, ug/kg								
1,2-Dichloroethene (total)	26 a	700,000	18,000,000					79 J
Acetone	260	7,800,000	200,000,000	12 J	26	11 J		
Methylene chloride	16	85,000	760,000					130 J
Trichloroethene	6.5	58,000	520,000				1 J	19000
NOTES:								
Analytical units in microgram per kilogram (ug/kg)								
J = Reported concentration is an estimated quantity.								
a = Value indicated is for cis-DCE (corresponding value for trans-DCE is 62 ug/kg).								
SCG: Florida Soil Cleanup Goals. Values indicated are residential surface soil values								
NA = Not applicable since there is not exceedance of groundwater guidance concentration.								
RBC = Risk-based Concentration Table, USEPA Region III, R.L. Smith, March 1998.								
Bold/shaded entries indicate exceedance of Florida SCGs.								

Attachment A2. Summary of Soil Investigative Derived Waste Analytical Results
Study Area 17

Naval Training Center, Orlando
Orlando, FL

Sample ID	17Z002	17Z003	17Z004	17Z005	17Z006	17Z007	17Z008
Lab ID	A8E280155001	A8E280155002	A8E280155003	A8E280155004	A8E280155005	A8E280155006	A8E280155007
Sampling Date	27-May-98						
Volatile organics, ug/kg							
1,1,1-Trichloroethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
1,1,2,2-Tetrachloroethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
1,1,2-Trichloroethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
1,1-Dichloroethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
1,1-Dichloroethene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
1,2-Dichloroethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
1,2-Dichloroethene (total)	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	79 J
1,2-Dichloropropane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
2-Butanone	24 U	25 U	24 U	23 U	24 U	24 U	3000 U
2-Hexanone	24 U	25 U	24 U	23 U	24 U	24 U	3000 U
4-Methyl-2-pentanone	24 U	25 U	24 U	23 U	24 U	24 U	3000 U
Acetone	24 U	12 J	26	23 U	11 J	24 U	3000 U
Benzene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Bromodichloromethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Bromoform	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Bromomethane	12 U	1500 U					
Carbon disulfide	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Carbon tetrachloride	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Chlorobenzene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Chloroethane	12 U	1500 U					
Chloroform	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Chloromethane	12 U	1500 U					
cis-1,3-Dichloropropene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Dibromochloromethane	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Ethylbenzene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Methylene chloride	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	130 J B
Styrene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Tetrachloroethene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Toluene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
trans-1,3-Dichloropropene	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U
Trichloroethene	6 U	6.1 U	6 U	5.8 U	5.9 U	1 J	19000
Vinyl chloride	12 U	1500 U					
Xylenes (total)	6 U	6.1 U	6 U	5.8 U	5.9 U	5.9 U	760 U