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INSTALLATION RESTORATION PROGRAM

REMEDIAL INVESTIGATION REPORT  
SITE 1, FIRE TRAINING AREA

VOLK FIELD AIR NATIONAL GUARD BASE,  
CAMP DOUGLAS, WI

JULY 1990

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VOLUME II

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# REPORT DOCUMENTATION PAGE

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**INSTALLATION RESTORATION PROGRAM**

**REMEDIAL INVESTIGATION REPORT  
SITE 1, FIRE TRAINING AREA**

**VOLK FIELD AIR NATIONAL GUARD BASE  
Camp Douglas, Wisconsin**

**VOLUME II**

**FILE**

**Submitted By**

**HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM  
MARTIN MARIETTA ENERGY SYSTEMS  
Oak Ridge, Tennessee**



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**July 1990**

**Prepared By**

**ENGINEERING-SCIENCE, INC.  
57 Executive Park South, Suite 590  
Atlanta, Georgia 30329**

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VOLK FIELD ANGB  
CAMP DOUGLAS, WI**

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*Volume II of this report contains data tables and photo notes of information gathered from the sampling of soils and ground water. Hydrocarbons and aromatic volatile organics are among the contaminants listed.*

**APPENDIX E**  
**ANALYTICAL DATA**

## APPENDIX E ANALYTICAL DATA

On the following pages are indices for analytical data for the Remedial Investigation conducted at Volk Field ANGB, Wisconsin. All references to "E" are located on the pages following the index (Appendix E of the Remedial Investigation).

This appendix is divided into three sections. Section 1 contains the Analytical Data on pages E-1 through E-495; Section 2 contains the Sample Preparation Data<sup>1</sup> (Holding Times) on pages E-496 through E-526; and Section 3 contains the Chain of Custody Records on pages E-527 through E-561.

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<sup>1</sup> Holding times for Base/Neutral Acid Extractables are found in the Analytical Data, Section 1. The laboratory number for Base/Neutral Acid Extractables is different than other laboratory numbers. The number is a 6 digit call number instead of 8 digits (e.g., laboratory number 88010190 is 880190 for Base/Neutral Acid Extractables).

APPENDIX E  
INDEX OF ANALYTICAL DATA

ES Number	Lab Number	Purgeable Halocarbons	Aromatic Volatile Organics	Petroleum Hydrocarbons	PCBs	Base/Neutral Acid Extractables	23 Priority Pollutants Metals	Lead Only	Total Dissolved Solids
<u>Site 1 (Fire Training Area)</u>									
VF1, B-1, SS-1, 0.5'	88010190	E-1, E-6	E-50, E-55	E-99	E-124	E-156-160		E-463	
VF1, B-1, SS-2, 3.5'	88010191	E-1, E-7	E-50, E-56	E-99	E-124	E-161-165		E-463	
VF1, B-1, SS-3, 8.5'	88010192	E-2, E-8	E-51, E-57	E-100	E-125	E-167-172		E-464	
VF1, B-2, SS-1, 0.5'	88010193	E-2	E-51	E-100	E-125	E-173-178		E-464	
VF1, B-2, SS-2, 3.5'	88010194	E-2	E-51	E-100	E-125	E-179-184		E-464	
VF1, B-2, SS-3, 8.5'	88010195	E-2	E-51	E-100	E-125	E-185-190		E-464	
VF1, B-3, SS-1, 1.0'	88010196	E-2	E-51	E-100	E-125	E-191-196		E-464	
VF1, B-3, SS-2, 3.5'	88010197	E-2	E-51	E-100	E-125	E-197-202		E-464	
VF1, B-3, SS-3, 8.5'	88010186	E-1	E-50, E-54	E-99	E-124	E-203-208		E-463	
VF1, B-4, SS-1, 0.5'	88010189	E-1, E-5	E-52	E-99	E-124	E-209-214		E-463	
VF1, B-4, SS-2, 3.5'	88010198	E-3	E-52, E-58	E-101	E-126	E-215-220		E-465	
VF1, B-4, SS-3, 8.5'	88010199	E-3	E-60	E-101	E-126	E-221-226		E-465	
VF1, B-5, SS-1, 0'	88010209	E-10	E-61	E-121	E-129	E-227-231		E-480	
VF1, B-5, SS-2, 3.5'	88010210	E-11	E-61, E-64	E-122	E-130	E-232-236		E-481	
VF1, B-5, SS-3, 10.0'	88010211	E-11	E-61, E-65	E-122	E-130	E-237-241		E-481	
VF1, B-6, SS-1, 0'	88010212	E-11	E-60, E-62	E-121	E-129	E-242-246		E-480	
VF1, B-6, SS-2, 3.5'	88010205	E-10, E-12	E-60, E-63	E-121	E-129	E-247-251		E-480	
VF1, B-6, SS-3, 8.5'	88010206	E-10, E-13	E-60	E-121	E-129	E-252-256		E-480	
VF1, B-7, SS-1, 0'	88010207	E-10	E-60	E-121	E-129	E-257-261		E-480	
VF1, B-7, SS-2, 3.5'	88010208	E-10	E-60	E-121	E-129	E-262-266		E-480	
VF1, B-7, SS-3, 8.5'	88010204	E-10	E-60	E-121	E-129	E-267-271		E-480	
VF1, B-8, SS-1, 0'	88010217	E-15	E-67	E-108	E-133	E-272-276		E-468	
VF1, B-8, SS-2, 3.5'	88010218	E-15	E-67	E-108	E-133	E-277-281		E-468	
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VF1, B-9, SS-1, 0'	88010220	E-16	E-68	E-109	E-134	E-287-291		E-469	
VF1, B-9, SS-2, 3.5'	88010215	E-15	E-67	E-108	E-133	E-292-296		E-468	
VF1, B-9, SS-3, 8.5'	88010216	E-15	E-67	E-108	E-133	E-297-301		E-468	
VF1, B-10, SS-1, 0.5'	88020289	E-18	E-70	E-111	E-137	E-302-306		E-472	
VF1, B-10, SS-2, 3.5'	88020291	E-18	E-70	E-111	E-137	E-312-316		E-472	
VF1, B-10, SS-3, 8.5'	88020292	E-18	E-70	E-111	E-137	E-317-321		E-472	
VF1, B-11, SS-1, 1.0'	88020293	E-18	E-70	E-111	E-137	E-322-326		E-472	
VF1, B-11, SS-2, 3.5'	88020294	E-18	E-70	E-111	E-137	E-327-331		E-472	
VF1, B-11, SS-3, 8.5'	88020295	E-19, E-20	E-71, E-72	E-112	E-138	E-332-336		E-473	
VF1, B-12, SS-1, 1.0'	88020296	E-19	E-71	E-112	E-138	E-337-341		E-473	
VF1, B-12, SS-2, 3.5'	88020297	E-19	E-71	E-112	E-138	E-342-346		E-473	
VF1, B-12, SS-3, 8.5'	88020298	E-19	E-71	E-112	E-138	E-347-351		E-473	
VF1, B-13, SS-1, 1.5'	88020299	E-19	E-71	E-112	E-138	E-352-356		E-473	
VF1, B-13, SS-2, 3.5'	88020375	E-22	E-74	E-114	E-141	E-357-361		E-476	
VF1, B-13, SS-3, 8.5'	88020376	E-22	E-74	E-114	E-141	E-362-366		E-476	
VF1, B-14, SS-1, 1.0'	88020377	E-23	E-75	E-115	E-142	E-367-372		E-477	
VF1, B-14, SS-2, 3.5'	88020378	E-23	E-75	E-115	E-142	E-373-377		E-477	
VF1, B-14, SS-3, 8.5'	88020371	E-22	E-74	E-114	E-141	E-378-382		E-476	

E P L

APPENDIX E--Continued  
INDEX OF ANALYTICAL DATA

ES Number	Lab Number	Purgeable Halocarbons	Aromatic Volatile Organics	Petroleum Hydrocarbons	PCBs	Base/Neutral Acid Extractables	23 Priority Pollutants Metals	Lead Only	Total Dissolved Solids
<b>Site 1 (Fire Training Area) (Continued)</b>									
VP1, B-15, SS-1, 0.5'	88020372	E-22	E-74	E-114	E-141	E-383-387		E-476	
VP1, B-15, SS-2, 3.5'	88020373	E-22	E-74	E-114	E-141	E-388-392		E-476	
VP1, B-15, SS-3, 8.5'	88020374	E-22	E-74	E-114	E-141	E-393-397		E-476	
VP1, B-21, SS-1, 1.0'	88010187	E-1	E-50	E-99	E-124	E-398-403		E-463	
VP1, B-22, SS-1, 0.5'	88010188	E-1, E-4	E-50, E-53	E-99	E-124	E-404-409		E-463	
VP1, B-26, SS-1, 0'	88010214	E-15	E-67	E-108	E-133	E-410-414		E-468	
VP1, B-27, SS-1, 0.5'	88020290	E-18	E-70	E-111	E-137	E-407-414		E-472	
VP1, B-28, SS-1, 1.5'	88020300	E-19	E-71	E-112	E-138	E-415-419		E-473	
VP, ET-1, GM1, ES	88030567	E-39	E-83	E-119	E-147	E-421-425		E-490	E-119
VP, ET-2, GM1, ES	88030568	E-39	E-83	E-119	E-147	E-421-425		E-490	E-119
VP, ET-3, GM1, ES	88030569	E-39, E-41	E-83, E-85	E-119	E-147	E-426-429		E-490	E-119
VP, ET-4, GM1, ES	88030573	E-29, E-31	E-87, E-89	E-106	E-145	E-430-433		E-493	E-106
VP, ET-5, GM1, ES	88030572	E-29, E-30	E-87, E-88	E-106	E-145	E-430-433		E-493	E-106
VP, ET-6, GM1, ES	88030576	E-29	E-87	E-106	E-145	E-434-438		E-493	E-106
VP, ET-7, GM1, ES	88030575	E-29, E-32	E-87, E-90	E-106	E-145	E-439-442		E-493	E-106
VP, 1-W1, GM1, ES	88030540	E-26	E-77, E-81	E-103	E-149	E-443-446		E-487	E-103
VP, 1-W2, GM1, ES	88030566	E-39, E-40	E-83, E-84	E-119	E-147	E-447-450		E-490	E-119
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VP, 1-W5, GM1, ES	88030538	E-26	E-77, E-80	E-103	E-149	E-459-462		E-487	E-103
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VP, 11-W3, GM1, ES	88030542	E-27	E-78						
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VP, 11-W5, GM1, ES	88030570	E-39	E-83						
VP, 11-W6, GM1, ES	88030577	E-29	E-87						
<b>Bailer Rinsates</b>									
VP, 12-W2, GM1, ES	88030562	E-35	E-93	E-123a			E-484a	E-490	E-123a
VP, 12-W3, GM1, ES	88030565	E-39	E-83	E-119	E-147	E-447-450		E-490	E-119
<b>Field Blank</b>									
VP, 13-W1, GM1, ES	88030574	E-29	E-87	E-106		E-439-442	E-493		E-106
<b>Production Wells</b>									
VP, 950, GM-1, ES	88071335	E-43, E-46	E-97						
Trip Blank	88071336	E-43, E-47	E-97						
VP, 934, GM-1, ES	88071337	E-43, E-48	E-97						
VP, 916, GM-1, ES	88071338	E-43, E-49	E-97						



APPENDIX E--Continued  
INDEX OF SAMPLE PREPARATION DATA

Lab Number	ES Number	Purgeable Halocarbons	Aromatic Volatile Organics	Petroleum Hydrocarbons	PCBs	Base/Neutral Acid Extractables*	Metals	Total Dissolved Solids	Moisture
88010186	VF1, B-3, SS-3 8.5'	E-498	E-498	E-498	E-498	E-502	E-502	E-496	E-496
88010187	VF1, B-21, SS-1 1.0'	E-498	E-498	E-498	E-498	E-502	E-502	E-496	E-496
88010188	VF1, B-22, SS-1 0.5'	E-498	E-498	E-498	E-498	E-502	E-502	E-496	E-496
88010189	VF1, B-4, SS-1 0.5'	E-498	E-498	E-498	E-498	E-502	E-502	E-496	E-496
88010190	VF1, B-1, SS-1 0.5'	E-498	E-498	E-498	E-498	E-502	E-502	E-496	E-496
88010191	VF1, B-1, SS-2 3.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010192	VF1, B-1, SS-3 8.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010193	VF1, B-2, SS-1 0.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010194	VF1, B-2, SS-2 3.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010195	VF1, B-2, SS-3 8.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010196	VF1, B-3, SS-1 1.0'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010197	VF1, B-3, SS-2 3.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010198	VF1, B-4, SS-2 3.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010199	VF1, B-4, SS-3 8.5'	E-499	E-499	E-499	E-499	E-502	E-502	E-496	E-496
88010204	VF1, B-7, SS-3 8.5'	E-503	E-503	E-503	E-503	E-505	E-505	E-496	E-496
88010205	VF1, B-6, SS-2 3.5'	E-503	E-503	E-503	E-503	E-505	E-505	E-496	E-496
88010206	VF1, B-6, SS-3 8.5'	E-503	E-503	E-503	E-503	E-505	E-505	E-496	E-496
88010207	VF1, B-7, SS-1 0'	E-503	E-503	E-503	E-503	E-505	E-505	E-496	E-496
88010208	VF1, B-7, SS-2 3.5'	E-503	E-503	E-503	E-503	E-505	E-505	E-496	E-496
88010209	VF1, B-5, SS-1 0'	E-503	E-503	E-503	E-503	E-505	E-505	E-496	E-496
88010210	VF1, B-5, SS-2 3.5'	E-504	E-504	E-504	E-504	E-505	E-505	E-496	E-496
88010211	VF1, B-5, SS-3 10.0'	E-504	E-504	E-504	E-504	E-505	E-505	E-496	E-496
88010212	VF1, B-6, SS-1 0'	E-504	E-504	E-504	E-504	E-505	E-505	E-496	E-496
88010214	VF1, B-26, SS-1 0'	E-506	E-506	E-506	E-506	E-508	E-508	E-497	E-497
88010215	VF1, B-9, SS-2 3.5'	E-506	E-506	E-506	E-506	E-508	E-508	E-497	E-497
88010216	VF1, B-9, SS-3 8.5'	E-506	E-506	E-506	E-506	E-508	E-508	E-497	E-497
88010217	VF1, B-8, SS-1 0'	E-506	E-506	E-506	E-506	E-508	E-508	E-497	E-497
88010218	VF1, B-8, SS-2 3.5'	E-506	E-506	E-506	E-506	E-508	E-508	E-496	E-496
88010219	VF1, B-8, SS-3 8.5'	E-506	E-506	E-506	E-506	E-508	E-508	E-496	E-496
88010220	VF1, B-9, SS-1 0'	E-507	E-507	E-507	E-507	E-508	E-508	E-496	E-496
88020289	VF1, B-10, SS-1 0.5'	E-509	E-509	E-509	E-509	E-511	E-511	E-496	E-496
88020290	VF1, B-27, SS-1 0.5'	E-509	E-509	E-509	E-509	E-511	E-511	E-496	E-496
88020291	VF1, B-10, SS-2 3.5'	E-509	E-509	E-509	E-509	E-511	E-511	E-496	E-496
88020292	VF1, B-10, SS-3 8.5'	E-509	E-509	E-509	E-509	E-511	E-511	E-496	E-496
88020293	VF1, B-11, SS-1 1.0'	E-509	E-509	E-509	E-509	E-511	E-511	E-496	E-496
88020294	VF1, B-11, SS-2 3.5'	E-509	E-509	E-509	E-509	E-511	E-511	E-496	E-496
88020295	VF1, B-11, SS-3 8.5'	E-510	E-510	E-510	E-510	E-511	E-511	E-496	E-496
88020296	VF1, B-12, SS-1 1.0'	E-510	E-510	E-510	E-510	E-511	E-511	E-496	E-496
88020297	VF1, B-12, SS-2 3.5'	E-510	E-510	E-510	E-510	E-511	E-511	E-496	E-496
88020298	VF1, B-12, SS-3 8.5'	E-510	E-510	E-510	E-510	E-511	E-511	E-496	E-496
88020299	VF1, B-13, SS-1 1.5'	E-510	E-510	E-510	E-510	E-511	E-511	E-496	E-496
88020300	VF1, B-28, SS-1 1.5'	E-510	E-510	E-510	E-510	E-511	E-511	E-496	E-496
88020371	VF1, B-14, SS-3 8.5'	E-512	E-512	E-512	E-512	E-514	E-514	E-496	E-496
88020372	VF1, B-15, SS-1 0.5'	E-512	E-512	E-512	E-512	E-514	E-514	E-496	E-496
88020373	VF1, B-15, SS-2 3.5'	E-512	E-512	E-512	E-512	E-514	E-514	E-496	E-496

APPENDIX E--Continued  
INDEX OF SAMPLE PREPARATION DATA

Lab Number	ES Number	Purgeable Halocarbons	Aromatic Volatile Organics	Petroleum Hydrocarbons	PCBs	Base/Neutral Acid Extractables*	Metals	Total Dissolved Solids	Moisture
88020374	VF1, B-15, SS-3	8.5'	E-512	E-512	E-512		E-514	E-516	E-496
88020375	VF1, B-13, SS-2	3.5'	E-512	E-512	E-512		E-514	E-516	E-496
88020376	VF1, B-13, SS-3	8.5'	E-512	E-512	E-512		E-514	E-516	E-496
88020377	VF1, B-14, SS-1	1.0'	E-513	E-513	E-513		E-514	E-516	E-496
88020378	VF1, B-14, SS-2	3.5'	E-513	E-513	E-513		E-514	E-516	E-496
88030537	VF, 1-W4, GM1, ES		E-516	E-516	E-516		E-518	E-516	
88030538	VF, 1-W5, GM1, ES		E-516	E-516	E-516		E-518	E-516	
88030540	VF, 1-W1, GM1, ES		E-516	E-516	E-516		E-518	E-516	
88030542	VF, 11-W3, GM1, ES		E-517	E-517	E-517				
88030554	VF, 1-W3, GM1, ES		E-519	E-519	E-519		E-522	E-519	
88030555	VF, 10-W1, GM1, ES		E-519	E-519	E-519		E-522	E-519	
88030562	VF, 12-W2, GM1, ES		E-521	E-521	E-521		E-522	E-521	
88030563	VF, 11-W4, GM1, ES		E-521	E-521	E-521				
88030565	VF, 12-W3, GM1, ES		E-523	E-523	E-523		E-524	E-523	
88030566	VF, 1-W2, GM1, ES		E-523	E-523	E-523		E-524	E-523	
88030567	VF, ET-1, GM1, ES		E-523	E-523	E-523		E-524	E-523	
88030568	VF, ET-2, GM1, ES		E-523	E-523	E-523		E-524	E-523	
88030569	VF, ET-3, GM1, ES		E-523	E-523	E-523		E-524	E-523	
88030570	VF, 11-W5, GM1, ES		E-523	E-523	E-523		E-524	E-523	
88030572	VF, ET-5, GM1, ES		E-525	E-525	E-525		E-515	E-525	
88030573	VF, ET-4, GM1, ES		E-525	E-525	E-525		E-515	E-525	
88030574	VF, 13-W1, GM1, ES		E-525	E-525	E-525		E-515	E-525	
88030575	VF, ET-7, GM1, ES		E-525	E-525	E-525		E-515	E-525	
88030576	VF, ET-6, GM1, ES		E-525	E-525	E-525		E-515	E-525	
88030577	VF, 11-W6, GM1, ES		E-525	E-525	E-525		E-541	E-551	
88071335	VF, 950, GM-1, ES		E-526	E-526	E-526				
88071336	Trip Blank		E-526	E-526	E-526				
88071337	VF, 934, GM-1, ES		E-526	E-526	E-526				
88071338	VF, 916, GM-1, ES		E-526	E-526	E-526				

\* Holding times for Base/Neutral Acid Extractables are on the Analytical Data Sheet.

**ANALYTICAL RESULTS FOR  
PURGEABLE HALOCARBONS**

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,B-3,SS-3, 8.5'	VF1,B-21,SS-1, 1.0'	VF1,B-22,SS-1, 0.5'	VF1,B-4,SS-1, 0.5'	VF1,B-1,SS-1, 0.5'	VF1,B-1,SS-2, 3.5'
	88010186	88010187	88010188	88010189	88010190	88010191
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	0.73	0.53	0.94	0.70
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	41	8.0	33	17
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,B-1,SS-3, 3.5' 88010192	VF1,B-2,SS-1, 0.5' 88010193	VF1,B-2,SS-2, 3.5' 88010194	VF1,B-2,SS-3, 8.5' 88010195	VF1,B-3,SS-1, 1.0' 88010196	VF1,B-3,SS-2, 3.5' 88010197
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	0.58	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	14	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,B-4,SS-2, 3.5' 88010198	VF1,B-4,SS-3, 8.5' 88010199
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY) METHANE	ND	ND
BIS (2-CHLOROISOPROPYL) ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLORO BENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	ND	ND
TRICHLORODIFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

2ND COLUMN CONFIRMATION DATA  
 4-21-88  
 WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010188  
 VF1,B-22,SS-1,0.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.73	1.4
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	41	48
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010189

VF1,B-4,SS-1,0.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROENZENE	ND	ND
1,3-DICHLOROENZENE	ND	ND
1,4-DICHLOROENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.53	0.63
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	8.0	3.2
TRICHLOROFUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND



## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010190

VF1,B-1,SS-1,0.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.94	0.32
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	33	55
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

2ND COLUMN CONFIRMATION DATA  
 4-21-88  
 WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010191  
 VF1,B-1,SS-2,3.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.70	0.86
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	17	24
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010192

VF1,B-1,SS-3,8.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	0.58	0.38
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	14	19
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

Detection Limits  
 Halogenated Volatile Organics  
 EPA Method 8010  
 Samples No.: 88010186 - 88010199

<u>Compound</u>	<u>Detection Limits</u>
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy) methane	0.50
bis (2-chloroisopropyl) ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-, m-, & p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
i,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,8-7,SS-3, 3.5' 88010204	VF1,8-6,SS-2, 3.5' 88010205	VF1,8-6,SS-3, 8.5' 88010206	VF1,8-7,SS-1, 0' 88010207	VF1,8-7,SS-2, 3.5' 88010208	VF1,8-5,SS-1,0' 88010209
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	5.7	8.6	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 3010

TEST COMPOUND	VF1,B-5,SS-2, 3.5'	VF1,B-5,SS-3, 10.0'	VF1,B-6,SS-1, 0'
	88010210	88010211	88010212
BENZYL CHLORIDE	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND
BROMOBENZENE	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND
BROMOFORM	ND	ND	ND
BROMOETHANE	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND
CHLORAL	ND	ND	ND
CHLORO BENZENE	ND	ND	ND
CHLOROETHANE	ND	ND	ND
CHLOROFORM	ND	ND	ND
1-CHLOROHEXANE	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND
CHLOROMETHANE	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND

## 2ND COLUMN CONFIRMATION DATA

4-22-88

WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010205

VF1, B-6, SS-2, 3.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	5.7	4.9
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

179.3.4

2ND COLUMN CONFIRMATION DATA  
4-22-88  
WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/Kg, GROUP 8010

88010206  
VF1, B-6, SS-3, 8.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DI BROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1, 2-DICHLOROBENZENE	ND	ND
1, 3-DICHLOROBENZENE	ND	ND
1, 4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1, 1-DICHLOROETHANE	ND	ND
1, 2-DICHLOROETHANE	ND	ND
1, 1-DICHLOROETHYLENE	ND	ND
1, 2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1, 2-DICHLOROPROPANE	ND	ND
1, 3-DICHLOROPROPYLENE	ND	ND
1, 1, 2, 2-TETRACHLOROETHANE	ND	ND
1, 1, 1, 2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1, 1, 1-TRICHLOROETHANE	ND	ND
1, 1, 2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	8.6	3.2
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

179.3.5



Detection Limits  
 Halogenated Volatile Organics  
 EPA Method 8010  
 Sample(s) No.: 88010204-88010212

<u>Compound</u>	<u>Detection Limits</u>
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy) methane	0.50
bis (2-chloroisopropyl) ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-, m-, & p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

179.3.1

04/18/88

## ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,8-26,SS-1, 0'	VF1,8-9,SS-2, 3.5'	VF1,9-9,SS-3, 9.5'	VF1,8-8,SS-1, 0'	VF1,8-8,SS-2, 3.5'	VF1,8-8,SS-3, 9.5'
	98010214	88010215	88010216	88010217	88010218	88010219
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRICHLOROFUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8010

VF1,8-9,SS-1,  
01  
88010220

TEST COMPOUND  
-----

BENZYL CHLORIDE	ND
515 (2-CHLOROETHOXY)METHANE	ND
315 (2-CHLOROISOPROPYL)ETHER	ND
BROMOBENZENE	ND
BROMODICHLOROMETHANE	ND
BROMOFORM	ND
BROMOETHANE	ND
CARBON TETRACHLORIDE	ND
CHLOROACETALDEHYDE	ND
CHLORAL	ND
CHLORO BENZENE	ND
CHLOROETHANE	ND
CHLOROFORM	ND
1-CHLOROHEXANE	ND
2-CHLOROETHYL VINYL ETHER	ND
CHLOROMETHANE	ND
CHLOROMETHYL METHYL ETHER	ND
CHLOROTOLUENE	ND
DIBROMOCHLOROMETHANE	ND
DIBROMOMETHANE	ND
1,2-DICHLORO BENZENE	ND
1,3-DICHLORO BENZENE	ND
1,4-DICHLORO BENZENE	ND
DICHLORODIFLUOROMETHANE	ND
1,1-DICHLOROETHANE	ND
1,2-DICHLOROETHANE	ND
1,1-DICHLOROETHYLENE	ND
TRANS-1,2-DICHLOROETHYLENE	ND
DICHLOROMETHANE	ND
1,2-DICHLOROPROPANE	ND
1,3-DICHLOROPROPYLENE	ND
1,1,2,2-TETRACHLOROETHANE	ND
1,1,1,2-TETRACHLOROETHANE	ND
TETRACHLOROETHYLENE	ND
1,1,1-TRICHLOROETHANE	ND
1,1,2-TRICHLOROETHANE	ND
TRICHLOROETHYLENE	ND
TRICHLOROFLUOROMETHANE	ND
TRICHLOROPROPANE	ND
VINYL CHLORIDE	ND

Detection Limits  
Halogenated Volatile Organics  
EPA Method 8010  
Sample(s) No.: 88010214-88010220

<u>Compound</u>	<u>Detection Limits</u>
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy) methane	0.50
bis (2-chloroisopropyl) ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-,m-, & p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18
Freon 113	5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

179.5.1

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/Kg, GROUP 8010

TEST COMPOUND	VF1,8-10,SS-1, 0.5'	VF1,8-27,SS-1, 0.5'	VF1,8-10,SS-2, 3.5'	VF1,8-10,SS-3, 8.5'	VF1,8-11,SS-1, 1.0'	VF1,8-11,SS-2, 3.5'
	88020289	88020290	88020291	88020292	88020293	88020294
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,8-11,SS-3, 3.5'	VF1,8-12,SS-1 1.0'	VF1,8-12,SS-2, 3.5'	VF1,8-12,SS-3, 2.5'	VF1,8-13,SS-1, 1.5'	VF1,8-28,SS-1, 1.5'
	88020295	88020296	88020297	88020298	88020299	88020300
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	3.3	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

2ND COLUMN CONFIRMATION DATA  
4-22-88  
WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/Kg, GROUP 8010

88020295  
VF1, B-11, SS-3, 8.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	3.3	3.2
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

179.2.4

Detection Limits  
 Halogenated Volatile Organics  
 EPA Method 8010  
 Sample(s) No.: 88020289-88020300

<u>Compound</u>	<u>Detection Limits</u>
Benzyl chloride	0.50 ug/Kg
bis (2-chloroethoxy) methane	0.50
bis (2-chloroisopropyl) ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.50
O-,m-, & p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichloropropylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18
Freon 113	5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

179.2.1



ENGINEERING SCIENCE INC.  
04/18/88

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ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,B-14,SS-3, 3.5'	VF1,B-15,SS-1, 0.5'	VF1,B-15,SS-2, 3.5'	VF1,B-15,SS-3, 3.5'	VF1,B-13,SS-2, 3.5'	VF1,B-13,SS-3, 3.5'
	88020371	88020372	88020373	88020374	88020375	88020376
BENZYL CHLORIDE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND	ND	ND	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND	ND	ND	ND	ND
BROMOBENZENE	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORACETALDEHYDE	ND	ND	ND	ND	ND	ND
CHLORAL	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
1-CHLOROHXANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROTOLUENE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
DICHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHYLENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROPROPANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 8010

TEST COMPOUND	VF1,B-14,SS-1, 1.0' 88020377	VF1,B-14,SS-2, 3.5' 88020378
BENZYL CHLORIDE	ND	ND
BIS (2-CHLOROETHOXY)METHANE	ND	ND
BIS (2-CHLOROISOPROPYL)ETHER	ND	ND
BROMOBENZENE	ND	ND
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLORACETALDEHYDE	ND	ND
CHLORAL	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
CHLOROFORM	ND	ND
1-CHLOROHEXANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROMETHANE	ND	ND
CHLOROMETHYL METHYL ETHER	ND	ND
CHLOROTOLUENE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
DIBROMOMETHANE	ND	ND
1,2-DICHLORO BENZENE	ND	ND
1,3-DICHLORO BENZENE	ND	ND
1,4-DICHLORO BENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHYLENE	ND	ND
TRANS-1,2-DICHLOROETHYLENE	ND	ND
DICHLOROMETHANE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
1,3-DICHLOROPROPYLENE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
1,1,1,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHYLENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHYLENE	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND
TRICHLOROPROPANE	ND	ND
VINYL CHLORIDE	ND	ND

**Detection Limits**  
**Purgeable Halocarbons**  
**EPA 601**  
**Samples No.: 88020371 - 88020378**

<u>Compound</u>	<u>Detection Limits</u>
Bromodichloromethane	0.10 ug/Kg
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

DETECTION LIMITS  
 HALOGENATED VOLATILE ORGANICS  
 EPA METHOD 8010  
 SAMPLES NO.: 88020371-88020378

Compound	Detection Limits
Benzyl chloride	0.50 ug/Kg
bis(2-chloroethoxy)methane	0.50
bis(2-chloroisopropyl)ether	0.50
Bromobenzene	0.50
Bromodichloromethane	0.10
Bromoform	0.20
Bromomethane	0.50
Carbon Tetrachloride	0.12
Chloroacetaldehyde	0.50
Chloral	0.50
Chlorobenzene	0.25
Chloroethane	0.52
Chloroform	0.05
1-Chlorohexane	0.50
2-Chloroethyl vinyl ether	0.13
Chloromethane	0.08
Chloromethyl methyl ether	0.05
O-, m-, & p-Chlorotoluenes	0.50
Dibromochloromethane	0.09
Dibromomethane	0.50
1,2-Dichlorobenzene	0.15
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	0.50
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethylene	0.13
trans-1,2-Dichloroethylene	0.10
Dichloromethane	0.50
1,2-Dichloropropane	0.04
1,3-Dichlorophyopylene	0.34
1,1,2,2-Tetrachloroethane	0.03
1,1,1,2-Tetrachloroethane	0.50
Tetrachloroethylene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethylene	0.12
Trichlorofluoromethane	0.50
Trichloropropane	0.50
Vinyl chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF,2-W1,6W1,ES 88030536	VF,1-W4,6W1,ES 88030537	VF,1-W5,6W1,ES 88030538	VF,2-W2,6W1,ES 88030539	VF,1-W1,6W1,ES 88030540	VF,3/6-W1,6W1, ES 88030541
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 601

VF, 11-W3, GW1, 25

TEST COMPOUND 28030542

BROMODICHLOROMETHANE	ND
BROMOFORM	ND
BROMOMETHANE	ND
CARBON TETRACHLORIDE	ND
CHLOROBENZENE	ND
CHLOROETHANE	ND
DICHLOROETHYL VINYL ETHER	ND
CHLOROFORM	ND
CHLOROMETHANE	ND
DIBROMOCHLOROMETHANE	ND
1,2-DICHLOROBENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
DICHLORODIFLUOROMETHANE	ND
1,1-DICHLOROETHANE	ND
1,2-DICHLOROETHANE	ND
1,1-DICHLOROETHENE	ND
TRANS-1,2-DICHLOROETHENE	ND
1,2-DICHLOROPROPANE	ND
CIS-1,3-DICHLOROPROPENE	ND
TRANS-1,3-DICHLOROPROPENE	ND
METHYLENE CHLORIDE	ND
1,1,2,2-TETRACHLOROETHANE	ND
TETRACHLOROETHENE	ND
1,1,1-TRICHLOROETHANE	ND
1,1,2-TRICHLOROETHANE	ND
TRICHLOROETHENE	ND
TRICHLOROFLUOROMETHANE	ND
VINYL CHLORIDE	ND

Detection Limits  
 Purgeable Halocarbons  
 EPA 601  
 Samples No.: 88030536 - 88030542

<u>Compound</u>	<u>Detection Limits</u>
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF,ET-5,6W1,ES	VF,ET-4,6W1,ES	VF,13-W1,6W1,ES	VF,ET-7,6W1,ES	VF,ET-6,6W1,ES	VF,11-W6,3W1,ES
	88030572	88030573	88030574	88030575	88030576	88030577
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORO BENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	1.5	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	60	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	6.5	0.7	ND	1.6	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND



## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 601

88030572

VF, ET-5, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	1.5	5.0
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	ND	ND
1,1,1-TRICHLOROETHANE	60	26
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	6.5	5.2
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 601

88030573  
VF, ET-4, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	0.7	0.7
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 601

88030575  
VF, ET-7, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	1.6	1.3
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND

Detection Limits  
 Purgeable Halocarbons  
 EPA 601  
 Samples No.: 88030572 - 88030577

<u>Compound</u>	<u>Detection Limits</u>
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF, 2-W5, 6W1, ES	VF, 2-1, 5W1, ES	VF, 2-2, 5W1, ES	VF, 1-W3, 6W1, ES	VF, 10-W1, 6W1, ES	VF, 2-W3, 6W1, ES
	88030551	88030552	88030553	88030554	88030555	88030556
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	1.6	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	4.5	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	13.1	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

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TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF,2-W4,6M1,ES	VF,10-W2,6M1,ES	VF,10-W3,6M1,ES	VF,10-W5,6M1,ES	VF,10-W4,6M1,ES	VF,12-W2,6M1,ES
	88030557	88030558	88030559	88030560	88030561	88030562
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORO BENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
ETHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

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ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 601

VF, 11-W4, GW1, ES

TEST COMPOUND

88030563

BROMODICHLOROMETHANE	ND
BROMOFORM	ND
BROMOMETHANE	ND
CARBON TETRACHLORIDE	ND
CHLOROETHANE	ND
2-CHLOROETHYL VINYL ETHER	ND
CHLOROFORM	ND
CHLOROMETHANE	ND
DIBROMOCHLOROMETHANE	ND
1,2-DICHLOROBENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
DICHLORODIFLUOROMETHANE	ND
1,1-DICHLOROETHANE	ND
1,2-DICHLOROETHANE	ND
1,1-DICHLOROETHENE	ND
TRANS-1,2-DICHLOROETHENE	ND
1,2-DICHLOROPROPANE	ND
CIS-1,3-DICHLOROPROPENE	ND
TRANS-1,3-DICHLOROPROPENE	ND
METHYLENE CHLORIDE	ND
1,1,2,2-TETRACHLOROETHANE	ND
TETRACHLOROETHENE	ND
1,1,1-TRICHLOROETHANE	ND
1,1,2-TRICHLOROETHANE	ND
TRICHLOROETHENE	ND
TRICHLOROFLUOROMETHANE	ND
VINYL CHLORIDE	ND

2ND COLUMN CONFIRMATION DATA  
 4-21-88  
 WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 601

88030554  
 VF, 1-W3, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	1.6	1.4
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	4.5	3.5
1,2-DICHLOROPROPANE	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	13.1	17.3
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND



Detection Limits  
Purgeable Halocarbons  
EPA 601  
Samples No.: 88030551 - 88030563

<u>Compound</u>	<u>Detection Limits</u>
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF, 12-W3, GW1, ES	VF, 1-W2, GW1, ES	VF, ET-1, GW1, ES	VF, ET-2, GW1, ES	VF, ET-3, GW1, ES	VF, 11-W5, GW1, ES
	88030565	88030566	88030567	88030568	88030569	88030570
BROMODICHLOROMETHANE	ND	ND	ND	ND	ND	ND
BROMOFORM	ND	ND	ND	ND	ND	ND
BROMOMETHANE	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
CHLORO BENZENE	ND	ND	ND	ND	ND	ND
CHLOROETHANE	ND	ND	ND	ND	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND	ND	ND	ND	ND
CHLOROFORM	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND
1,2-DICHLORO BENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLORO BENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLORO BENZENE	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	ND	ND	ND	ND	12	ND
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	10	ND
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	ND	0.9	ND	ND	79	ND
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND

2ND COLUMN CONFIRMATION DATA  
 4-21-88  
 WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP 601

88030566  
 VF,1-W2,GW1,ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	ND	ND
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	ND	ND
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	0.9	1.2
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP 601

88030569  
VF, ET-3, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BROMODICHLOROMETHANE	ND	ND
BROMOFORM	ND	ND
BROMOETHANE	ND	ND
CARBON TETRACHLORIDE	ND	ND
CHLOROBENZENE	ND	ND
CHLOROETHANE	ND	ND
2-CHLOROETHYL VINYL ETHER	ND	ND
CHLOROFORM	ND	ND
CHLOROMETHANE	ND	ND
DIBROMOCHLOROMETHANE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
DICHLORODIFLUOROMETHANE	ND	ND
1,1-DICHLOROETHANE	12	3.3
1,2-DICHLOROETHANE	ND	ND
1,1-DICHLOROETHENE	ND	ND
TRANS-1,2-DICHLOROETHENE	ND	ND
1,2-DICHLOROPROPANE	ND	ND
CIS-1,3-DICHLOROPROPENE	ND	ND
TRANS-1,3-DICHLOROPROPENE	10	2.0
METHYLENE CHLORIDE	ND	ND
1,1,2,2-TETRACHLOROETHANE	ND	ND
TETRACHLOROETHENE	ND	ND
1,1,1-TRICHLOROETHANE	ND	ND
1,1,2-TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	79	42
TRICHLOROFLUOROMETHANE	ND	ND
VINYL CHLORIDE	ND	ND

Detection Limits  
Purgeable Halocarbons  
EPA 601  
Samples No.: 88030565 - 88030570

<u>Compound</u>	<u>Detection Limits</u>
Bromodichloromethane	0.10 ug/L
Bromoform	0.20
Bromomethane	1.18
Carbon tetrachloride	0.12
Chlorobenzene	0.25
Chloroethane	0.52
2-Chloroethyl vinyl ether	0.13
Chloroform	0.05
Chloromethane	0.08
Dibromochloromethane	0.09
1,2-Dichlorobenzene	0.18
1,3-Dichlorobenzene	0.32
1,4-Dichlorobenzene	0.24
Dichlorodifluoromethane	1.81
1,1-Dichloroethane	0.07
1,2-Dichloroethane	0.03
1,1-Dichloroethene	0.13
trans-1,2-Dichloroethene	0.10
1,2-Dichloropropane	0.04
cis-1,3-Dichloropropene	0.20
trans-1,3-Dichloropropene	0.34
Methylene chloride	0.25
1,1,2,2-Tetrachloroethane	0.03
Tetrachloroethene	0.03
1,1,1-Trichloroethane	0.03
1,1,2-Trichloroethane	0.02
Trichloroethene	0.12
Trichlorofluoromethane	0.50
Vinyl Chloride	0.18

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT

WORK ORDER NUMBER: 732  
JOB NUMBER : Z80000000400  
WORK ORDER DATE : 07/08/88

APPROVED BY \_\_\_\_\_  
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
DAN LANE

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : DAN LANE  
(404)-325-0770

TASK: 4, UNITS: ug/L, GROUP 601

TEST COMPOUND	VF 950	GW-1 ES	TRIP BLANK	VF 934	GW-1 ES	VF 916	GW-1 ES
	7-7-88 1140	7-7-88 1203		7-7-88 1215	7-7-88 1250		
	88071335	88071336		88071337	88071338		
BROMODICHLOROMETHANE	ND	ND		ND	ND		
BROMOFORM	ND	ND		ND	ND		
BROMOMETHANE	ND	ND		ND	ND		
CARBON TETRACHLORIDE	ND	ND		ND	ND		
CHLOROBENZENE	ND	ND		ND	ND		
CHLOROETHANE	ND	ND		ND	ND		
2-CHLOROETHYL VINYL ETHER	ND	ND		ND	ND		
CHLOROFORM	ND	ND		ND	ND		
CHLOROMETHANE	ND	ND		ND	ND		
DIBROMOCHLOROMETHANE	ND	ND		ND	ND		
1,2-DICHLOROBENZENE	ND	ND		ND	ND		
1,3-DICHLOROBENZENE	ND	ND		ND	ND		
1,4-DICHLOROBENZENE	ND	ND		ND	ND		
DICHLORODIFLUOROMETHANE	ND	ND		ND	ND		
1,1-DICHLOROETHANE	ND	ND		ND	ND		
1,2-DICHLOROETHANE	ND	ND		ND	ND		
1,1-DICHLOROETHENE	ND	ND		ND	ND		
TRANS-1,2-DICHLOROETHENE	ND	ND		ND	ND		
1,2-DICHLOROPROPANE	ND	ND		ND	ND		
CIS-1,3-DICHLOROPROPENE	ND	ND		ND	ND		
TRANS-1,3-DICHLOROPROPENE	ND	ND		ND	ND		
METHYLENE CHLORIDE	1.58	5.68		1.98	1.78		
1,1,2,2-TETRACHLOROETHANE	ND	ND		ND	ND		
TETRACHLOROETHENE	ND	ND		ND	ND		
1,1,1-TRICHLOROETHANE	ND	ND		ND	ND		
1,1,2-TRICHLOROETHANE	ND	ND		ND	ND		
TRICHLOROETHENE	ND	ND		ND	ND		
TRICHLOROFLUOROMETHANE	ND	ND		ND	ND		
VINYL CHLORIDE	ND	ND		ND	ND		

ND - Not Detected

LEGEND FOR ORGANIC RESULT QUALIFIERS

- U     The compound was analyzed for but not detected.
- J     The value reported is an estimated concentration. This is used when the compound is detected at an amount less than the quantitation limit.
- C     This is used for pesticide results where identification has been confirmed by GC/MS.
- B     The analyte is found in the associated blank as well as in the sample.
- A     A TIC is a suspected aldol-condensation product.

DETECTION LIMITS  
PURGEABLE HALOCARBONS  
EPA METHOD 601  
SAMPLES NO.: 88071335-88071338

Compound	Detection Limits
Bromodichloromethane	0.10 ug/L
Bromoform	0.20 ug/L
Bromomethane	1.2 ug/L
Carbon Tetrachloride	0.12 ug/L
Chlorobenzene	0.25 ug/L
Chloroethane	0.52 ug/L
2-Chloroethyl vinyl ether	0.13 ug/L
Chloroform	0.05 ug/L
Chloromethane	0.08 ug/L
Dibromochloromethane	0.09 ug/L
1,2-Dichlorobenzene	0.15 ug/L
1,3-Dichlorobenzene	0.32 ug/L
1,4-Dichlorobenzene	0.24 ug/L
Dichlorodifluoromethane	1.81 ug/L
1,1-Dichloroethane	0.07 ug/L
1,2-Dichloroethane	0.03 ug/L
1,1-Dichloroethene	0.13 ug/L
trans-1,2-Dichloroethene	0.10 ug/L
1,2-Dichloropropane	0.04 ug/L
cis-1,3-Dichloropropene	0.20 ug/L
trans-1,3-Dichloropropene	0.34 ug/L
Methylene chloride	0.25 ug/L
1,1,2,2-Tetrachloroethane	0.03 ug/L
Tetrachloroethene	0.03 ug/L
1,1,1-Trichloroethane	0.03 ug/L
1,1,2-Trichloroethane	0.02 ug/L
Trichloroethene	0.12 ug/L
Trichlorofluoromethane	0.50 ug/L
Vinyl Chloride	0.18 ug/L

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.



2ND COLUMN CONFIRMATION DATA  
7-22-88  
WORK ORDER NUMBER 732

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071335

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethyl vinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene chloride	1.5B	0.25B
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
Vinyl chloride	ND	ND

2ND COLUMN CONFIRMATION DATA  
7-22-88  
WORK ORDER NUMBER 732

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071336

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethyl vinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene chloride	5.6B	1.2B
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
Vinyl chloride	ND	ND

2ND COLUMN CONFIRMATION DATA  
7-22-88  
WORK ORDER NUMBER 732

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071337

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethyl vinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene chloride	1.9B	0.29B
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
Vinyl chloride	ND	ND

2ND COLUMN CONFIRMATION DATA  
 7-22-88  
 WORK ORDER NUMBER 732

TASK: 4, UNITS: ug/L, GROUP 601

Sample No.: 88071338

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
Bromodichloromethane	ND	ND
Bromoform	ND	ND
Bromomethane	ND	ND
Carbon tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethyl vinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene chloride	1.7B	0.89B
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethane	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
Vinyl chloride	ND	ND

**ANALYTICAL RESULTS FOR  
AROMATIC VOLATILE ORGANICS**

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 9020

TEST COMPOUND	VF1,B-3,SS-3, 8.5'	VF1,B-21,SS-1, 1.0'	VF1,B-22,SS-1, 0.5'	VF1,B-4,SS-1, 0.5'	VF1,B-1,SS-1, 0.5'	VF1,B-1,SS-2, 3.5'
	88010186	88010187	88010188	88010189	88010190	88010191
BENZENE	ND	ND	170	2,000	16,000	6,500
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	1,100	4,800	17,000	6,300
TOLUENE	ND	ND	1,000	2,500	3,600	2,000
XYLENES	ND	ND	15,000	9,800	83,000	31,000

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-1,SS-3, 3.5'	VF1,B-2,SS-1, 0.5'	VF1,B-2,SS-2, 3.5'	VF1,B-2,SS-3, 3.5'	VF1,B-3,SS-1, 1.0'	VF1,B-3,SS-2, 3.5'
	88010192	88010193	88010194	88010195	88010196	88010197
BENZENE	19,000	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	15,000	ND	ND	ND	ND	ND
TOLUENE	5,700	ND	ND	ND	ND	ND
XYLENES	60,000	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,2-4,SS-2, 3.5' 88010198	VF1,2-4,SS-3, 8.5' 88010199
BENZENE	ND	41
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	110
TOLUENE	ND	51
XYLENES	ND	190



2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010188

VF1,B-22,SS-1,0.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	170	220
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	1,100	2,000
TOLUENE	1,000	1,000
XYLENES	15,000	12,000

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010189  
VF1,B-4,SS-1,0.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	2,000	1,700
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	4,800	970
TOLUENE	2,500	1,600
XYLENES	9,800	8,500

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010190

VF1,B-1,SS-1,0.5'

## Analysis Results

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	16,000	14,000
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	17,000	6,000
TOLUENE	3,600	6,500
XYLENES	83,000	45,000

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010191

VF1,B-1,SS-2,3.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	6,500	7,300
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	6,300	1,600
TOLUENE	2,000	3,200
XYLENES	31,000	33,000

2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010192

VF1,B-1,SS-3,8.5'

Analysis Results

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	19,000	14,000
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	15,000	5,200
TOLUENE	5,700	6,200
XYLENES	60,000	32,000

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010199

VF1,B-4,SS-3,8.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	41	75
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	110	110
TOLUENE	51	91
XYLENES	190	440

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Samples No.: 88010186 - 88010199

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-7,SS-3, 8.5'	VF1,B-6,SS-2, 3.5'	VF1,B-6,SS-3, 8.5'	VF1,B-7,SS-1, 0'	VF1,B-7,SS-2, 3.5'	VF1,B-5,SS-1,0'
	88010204	88010205	88010206	88010207	88010208	88010209
BENZENE	ND	1,200	970	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	5,000	3,500	ND	ND	ND
TOLUENE	ND	2,600	1,800	ND	ND	ND
XYLENES	ND	25,000	84,000	ND	ND	ND



04/18/88

## ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-3,SS-2, 3.5' 88010210	VF1,B-5,SS-3, 10.0' 88010211	VF1,B-5,SS-1, 0' 88010212
BENZENE	ND	110	120
CHLOROBENZENE	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND
ETHYL BENZENE	ND	360	370
TOLUENE	ND	500	800
XYLENES	ND	880	2,200

2ND COLUMN CONFIRMATION DATA  
4-22-88  
WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010205  
VF1, B-6, SS-2, 3.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	1200	1600
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	6000	9000
TOLUENE	2600	9200
XYLENES	25,000	29,000

2ND COLUMN CONFIRMATION DATA  
4-22-88  
WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010206  
VF1, B-6, SS-3, 8.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	970	720
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	8500	6700
TOLUENE	1800	1300
XYLENES	84,000	82,000

## 2ND COLUMN CONFIRMATION DATA

4-22-88

WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010211

VF1, B-5, SS-3, 10.0'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	110	110
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	360	300
TOLUENE	500	840
XYLENES	880	530

179.3.8

## 2ND COLUMN CONFIRMATION DATA

4-22-88

WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/Kg, GROUP 8020

88010212

VF1, B-6, SS-1, 0'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	120	160
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	370	420
TOLUENE	800	820
XYLENES	2200	2000

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Sample(s) No.: 88010204-88010212

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-26,SS-1, 0'	VF1,B-9,SS-2, 3.5'	VF1,B-9,SS-3, 8.5'	VF1,B-8,SS-1, 0'	VF1,B-8,SS-2, 3.5'	VF1,B-8,SS-3, 8.5'
	88010214	88010215	88010216	88010217	88010218	88010219
BENZENE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENES	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-9,SS-1, 01 88010220
BENZENE	ND
CHLOROBENZENE	ND
1,2-DICHLOROBENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
ETHYL BENZENE	ND
TOLUENE	ND
XYLENES	ND



Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Sample(s) No.: 88010214-88010220

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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## ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-10,SS-1, 0.5'	VF1,B-27,SS-1, 0.5'	VF1,B-10,SS-2, 3.5'	VF1,B-10,SS-3, 8.5'	VF1,B-11,SS-1, 1.0'	VF1,B-11,SS-2, 3.5'
	88020289	88020290	88020291	88020292	88020293	88020294
BENZENE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENES	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,B-11,SS-3, 8.5'	VF1,B-12,SS-1 1.0'	VF1,B-12,SS-2, 3.5'	VF1,B-12,SS-3, 8.5'	VF1,B-13,SS-1, 1.5'	VF1,B-28,SS-1, 1.5'
	88020295	88020296	88020297	88020298	88020299	88020300
BENZENE	15,000	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	40,000	ND	ND	ND	ND	ND
TOLUENE	37,000	ND	ND	ND	ND	ND
XYLENES	88,000	ND	ND	ND	ND	ND

2ND COLUMN CONFIRMATION DATA  
4-22-88  
WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/Kg, GROUP 8020

88020295  
VF1, B-11, SS-3, 8.5'

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	15,000	15,000
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	40,000	31,000
TOLUENE	37,000	17,000
XYLENES	88,000	146,000

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Sample(s) No.: 88020289-88020300

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 8020

TEST COMPOUND	VF1,8-14,SS-3, 8.5'	VF1,8-15,SS-1, 0.5'	VF1,8-15,SS-2, 3.5'	VF1,8-15,SS-3, 8.5'	VF1,8-13,SS-2, 3.5'	VF1,8-13,SS-3, 8.5'
	88020371	88020372	88020373	88020374	88020375	88020376
BENZENE	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	ND	ND
TOLUENE	ND	ND	ND	ND	ND	ND
XYLENES	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP 3020

TEST COMPOUND	VF1,B-14,SS-1, 1.0'	VF1,B-14,SS-2, 3.5'
-----	88020377	88020378
BENZENE	ND	ND
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	ND	ND
XYLENES	ND	ND

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Samples No.: 88020371 - 89020378

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/Kg
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.



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ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

TEST COMPOUND	VF,2-W1,6W1,ES	VF,1-W4,6W1,ES	VF,1-W5,6W1,ES	VF,2-W2,6W1,ES	VF,1-W1,6W1,ES	VF,3/6-w1,6w1, ES
	88030536	98030537	88030538	88030539	88030540	88030541
BENZENE	ND	450	4.5	ND	4.9	1.5
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	51	ND	ND	ND	ND
TOLUENE	ND	10.8	ND	ND	0.44	1.6
XYLENES	ND	107	4.7	ND	4.0	29.9

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

VF, 11-W3, GW1, ES

TEST COMPOUND 88030542

BENZENE	ND
CHLOROBENZENE	ND
1,2-DICHLOROBENZENE	ND
1,3-DICHLOROBENZENE	ND
1,4-DICHLOROBENZENE	ND
ETHYL BENZENE	ND
TOLUENE	ND
XYLENES	ND

2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

88030537

VF, 1-W4, GW1, ES

Analysis Results

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	450	360
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	51	53
TOLUENE	10.8	6.8
XYLENES	107	78

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

88030538

VF, 1-W5, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	4.5	3.4
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	ND	ND
XYLENES	4.7	8.9

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP 8020

88030540  
VP, 1-W1, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	4.9	8.0
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	0.44	0.56
XYLENES	4.0	4.1

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Samples No.: 88030536 - 88030542

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 536

ASK: 4, UNITS: ug/L, GROUP 8020

	VF,12-W3,6W1,ES	VF,1-W2,6W1,ES	VF,ET-1,6W1,ES	VF,ET-2,6W1,ES	VF,ET-3,6W1,ES	VF,11-W5,3W1,ES
EST COMPOUND	88030565	88030566	88030567	88030568	88030569	88030570
BENZENE	ND	1.2	ND	ND	8,270	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	ND	535	ND
STYRENE	ND	7.0	ND	ND	12,700	ND
PHENYLENES	ND	51.8	ND	ND	1,740	ND

## 2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP 8020

88030566

VF, 1-W2, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	1.2	0.6?
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	ND	ND
TOLUENE	7.0	7.6
XYLENES	51.8	37.5



2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP 8020

88030569  
VF, ET-3, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	8,720	8,150
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	535	706
TOLUENE	12,700	11,300
XYLENES	1,740	1,830

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Samples No.: 88030565 - 88030570

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 8020

TEST COMPOUND	VF,ET-5,6M1,ES	VF,ET-4,6M1,ES	VF,13-W1,6M1,ES	VF,ET-7,6M1,ES	VF,ET-6,6M1,ES	VF,11-W6,6M1,ES
	88030572	88030573	88030574	88030575	88030576	88030577
BENZENE	2,800	29	ND	153	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	390	166	ND	178	ND	ND
TOLUENE	3,950	40	ND	470	ND	ND
XYLENES	1,800	900	ND	694	ND	ND

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 8020

88030572  
VF, ET-5, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	2,800	3,390
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	390	187
TOLUENE	3,950	4,460
XYLENES	1,800	1,190

2ND COLUMN CONFIRMATION DATA  
4-21-88  
WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 8020

88030573  
VF,ET-4,GW1,ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	29	54
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	166	126
TOLUENE	40	39
XYLENES	900	790

2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP 8020

88030575

VF, ET-7, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	153	158
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	178	140
TOLUENE	470	473
XYLENES	694	710

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Samples No.: 88030572 - 88030577

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 8020

	VF,2-W5,GW1,ES	VF,2-1,SM1,ES	VF,2-2,SM1,ES	VF,1-W3,GW1,ES	VF,10-W1,GW1,ES	VF,2-W3,GW1,ES
TEST COMPOUND	88030551	88030552	88030553	88030554	88030555	88030556
BENZENE	ND	ND	ND	3,680	ND	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	100	ND	ND
TOLUENE	ND	ND	ND	1,827	ND	ND
XYLENES	ND	ND	ND	404	ND	ND



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ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 8020

VF,2-W4,6M1,ES VF,10-W2,6M1,ES VF,10-W3,6M1,ES VF,10-W5,6M1,ES VF,10-W4,6M1,ES VF,12-W2,6M1,ES

TEST COMPOUND	38030557	88030558	88030559	88030560	88030561	38030562
BENZENE	ND	ND	ND	167	114	ND
CHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
ETHYL BENZENE	ND	ND	ND	16.6	16.2	ND
TOLUENE	ND	ND	ND	149	100	ND
XYLENES	ND	ND	ND	58.7	45.1	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 8020

VF, 11-W4, GW1, ES

TEST COMPOUND

88030563

BENZENE	ND
CHLORO BENZENE	ND
1,2-DICHLORO BENZENE	ND
1,3-DICHLORO BENZENE	ND
1,4-DICHLORO BENZENE	ND
ETHYL BENZENE	ND
TOLUENE	ND
XYLENES	ND

2ND COLUMN CONFIRMATION DATA

4-21-88

WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP 8020

88030554

VF, 1-W3, GW1, ES

TEST COMPOUND	Analysis Results	
	Col 1	Col 2
BENZENE	3,680	3,570
CHLOROBENZENE	ND	ND
1,2-DICHLOROBENZENE	ND	ND
1,3-DICHLOROBENZENE	ND	ND
1,4-DICHLOROBENZENE	ND	ND
ETHYL BENZENE	100	134
TOLUENE	1,827	1,450
XYLENES	404	423

Detection Limits  
Aromatic Volatile Organics  
EPA Method 8020  
Samples No.: 88030551 - 88030563

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/L
Chlorobenzene	0.2
1,2-Dichlorobenzene	0.4
1,3-Dichlorobenzene	0.4
1,4-Dichlorobenzene	0.3
Ethylbenzene	0.2
Toluene	0.2
Xylenes (Dimethyl benzene)	0.4

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT

WORK ORDER NUMBER: 732  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 07/08/88

APPROVED BY \_\_\_\_\_  
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
DAN LANE

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : DAN LANE  
(404)-325-0770

TASK: 4, UNITS: ug/L, GROUP 8020

TEST COMPOUND	VF 950	GW-1 ES	TRIP BLANK	VF 934	GW-1 ES	VF 916	GW-1 ES
	7-7-88	1140	7-7-88 1203	7-7-88 1215	7-7-88 1250	7-7-88 1250	
	88071335		88071336	88071337		88071338	
BENZENE	ND		ND	ND		ND	
CHLOROBENZENE	ND		ND	ND		ND	
1,2-DICHLOROBENZENE	ND		ND	ND		ND	
1,3-DICHLOROBENZENE	ND		ND	ND		ND	
1,4-DICHLOROBENZENE	ND		ND	ND		ND	
ETHYL BENZENE	ND		ND	ND		ND	
TOLUENE	ND		ND	ND		ND	
XYLENES	ND		ND	ND		ND	

DETECTION LIMITS  
AROMATIC VOLATILE ORGANICS  
EPA METHOD 8020  
SAMPLES NO.: 88071335-88071338

<u>Compound</u>	<u>Detection Limits</u>
Benzene	0.2 ug/L
Chlorobenzene	0.2 ug/L
1,2-Dichlorobenzene	0.4 ug/L
1,3-Dichlorobenzene	0.4 ug/L
1,4-Dichlorobenzene	0.3 ug/L
Ethylbenzene	0.2 ug/L
Toluene	0.2 ug/L
Xylenes (Dimethyl benzene)	0.4 ug/L

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

**ANALYTICAL RESULTS FOR  
PETROLEUM HYDROCARBONS AND  
TOTAL DISSOLVED SOLIDS**

04/18/88

ANALYSIS REPORT

WORK ORDER NUMBER: 467  
 JOB NUMBER : ZB0000000400  
 WORK ORDER DATE : 01/27/88

APPROVED BY *RWB*  
 Lab Supervisor

REPORT DATA:  
 ES ATLANTA/VOLK FIELD ANGB  
 57 EXECUTIVE PARK STE. 390  
 ATLANTA, GA 30329  
 JIMMY DUNCAN

CLIENT DATA:  
 ES ATLANTA/VOLK FIELD ANGB ( 35 )  
 57 EXECUTIVE PARK STE. 390  
 ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
 CONTACT : JIMMY DUNCAN  
 (404)-325-0770

TASK: 3, UNITS: ug/Kg

TEST COMPOUND	VF1,B-3,SS-3, 8.5'	VF1,B-21,SS-1, 1.0'	VF1,B-22,SS-1, 0.5'	VF1,B-4,SS-1, 0.5'	VF1,B-1,SS-1, 0.5'	VF1,B-1,SS-2, 3.5'
	88010186	88010187	88010188	88010189	88010190	88010191
418.1 PETROLEUM HYDROCARBONS	<100	130	11000	11000	22000	8600



ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-1,SS-3, 8.5'	VF1,B-2,SS-1, 0.5'	VF1,B-2,SS-2, 3.5'	VF1,B-2,SS-3, 8.5'	VF1,B-3,SS-1, 1.0'	VF1,B-3,SS-2, 3.5'
-----	88010192	88010193	88010194	88010195	88010196	88010197
418.1 PETROLEUM HYDROCARBONS	8600	260	<100	<100	<100	<100

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-4,SS-2, 3.5' 88010198	VF1,B-4,SS-3, 3.5' 88010199
419.1 PETROLEUM HYDROCARBONS	220	1500

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88010186 - 88010199

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/Kg	100

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ENGINEERING SCIENCE INC.

04/18/88

ANALYSIS REPORT

WORK ORDER NUMBER: 530  
 ICS NUMBER : Z80000000400  
 WORK ORDER DATE : 03/05/88

APPROVED BY

*RWB*  
 Lab Supervisor

REPORT DATA:  
 ES ATLANTA/VOLK FIELD ANGB  
 57 EXECUTIVE PARK STE. 590  
 ATLANTA, GA 30329  
 JIMMY DUNCAN

CLIENT DATA:  
 ES ATLANTA/VOLK FIELD ANGB ( 85)  
 57 EXECUTIVE PARK STE. 590  
 ATLANTA, GA 30329

NO. OF REPORT COPIES: 1

CONTRACT PO # : AT077  
 CONTACT : JIMMY DUNCAN  
 (404)-325-0770

TASK: 3, UNITS: ug/L

TEST COMPOUND	VF,2-W1,6M1,ES 88030536	VF,1-W4,6M1,ES 88030537	VF,1-W5,6M1,ES 88030538	VF,2-W2,6M1,ES 88030539	VF,1-W1,6M1,ES 88030540	VF,3/6-W1,6M1, ES 88030541
418.1 PETROLEUM HYDROCARBONS	<1	<1	<1	<1	<1	<1
TOTAL DISSOLVED SOLIDS	33.0	550	164	73.0	129	

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88030536 - 88030540

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

Detection Limits  
Environmental Quality Parameters  
Sample No.: 88030541

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/L	1

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT

WORK ORDER NUMBER: 538  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 03/10/88

APPROVED BY *Bill Burton*  
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 35)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 3, UNITS: ug/L

VF,ET-5,6M1,ES VF,ET-4,6M1,ES VF,13-M1,6M1,ES VF,ET-7,6M1,ES VF,ET-6,6M1,ES

TEST COMPOUND	88030572	88030573	88030574	88030575	88030576
418.1 PETROLEUM HYDROCARBONS	110	18	<1	<1	<1
TOTAL DISSOLVED SOLIDS	382	191	<10	109	43.0

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88030572 - 88030576

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.



ANALYSIS REPORT

WORK ORDER NUMBER: 474  
JOB NUMBER : ZB000000C400  
WORK ORDER DATE : 01/29/88

APPROVED BY *R. W. Burston*  
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-26,SS-1, 0'	VF1,B-9,SS-2, 3.5'	VF1,B-9,SS-3, 8.5'	VF1,B-8,SS-1, 0'	VF1,B-8,SS-2, 3.5'	VF1,B-8,SS-3, 8.5'
	88010214	88010215	88010216	88010217	88010218	88010219
418.1 PETROLEUM HYDROCARBONS	<100	100	<100	160	<100	<100

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-9,SS-1, 0' 88010220
-----	-----
418.1 PETROLEUM HYDROCARBONS	<100

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88010214 - 88010220

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/Kg	100

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT

WORK ORDER NUMBER: 489  
 JOB NUMBER : ZB0000000400  
 WORK ORDER DATE : 02/10/88

APPROVED BY MWB  
 Lab Supervisor

REPORT DATA:  
 ES ATLANTA/VOLK FIELD ANGB  
 57 EXECUTIVE PARK STE. 590  
 ATLANTA, GA 30329  
 JIMMY DUNCAN

CLIENT DATA:  
 ES ATLANTA/VOLK FIELD ANGB : SS  
 57 EXECUTIVE PARK STE. 590  
 ATLANTA, GA 30329

\* OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
 CONTACT : JIMMY DUNCAN  
 (404)-325-0770

TASK: 3, UNITS: ug/Kg

TEST COMPOUND	VF1,8-10,SS-1, 0.5'	VF1,8-27,SS-1, 0.5'	VF1,8-10,SS-2, 3.5'	VF1,8-10,SS-3, 8.5'	VF1,8-11,SS-1, 1.0'	VF1,8-11,SS-2, 3.5'
	98020289	88020290	98020291	88020292	88020293	88020294
418.1 PETROLEUM HYDROCARBONS	570	750	<100	<100	<100	<100

ENGINEERING SCIENCE INC.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 3, UNITS: ug/Kg

TEST COMPOUND	VF1,B-11,SS-3, 3.5'	VF1,B-12,SS-1 1.0'	VF1,B-12,SS-2, 3.5'	VF1,B-12,SS-3, 8.5'	VF1,B-13,SS-1, 1.5'	VF1,B-28,SS-1, 1.5'
	88020295	88020296	88020297	88020298	88020299	88020300
419.1 PETROLEUM HYDROCARBONS	2900	<100	<100	<100	<100	<100

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88020289 - 88020300

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/Kg	100

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 3, UNITS: mg/Kg

TEST COMPOUND	VF1,B-14,SS-3, 8.5'	VF1,B-15,SS-1, 0.5'	VF1,B-15,SS-2, 3.5'	VF1,B-15,SS-3, 8.5'	VF1,B-13,SS-2, 3.5'	VF1,B-13,SS-3, 8.5'
418.1 PETROLEUM HYDROCARBONS	<100	<100	<100	<100	<100	<100

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## ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 3, UNITS: mg/Kg

	VF1,B-14,SS-1, 1.0'	VF1,B-14,SS-2, 3.5'
TEST COMPOUND	88020377	88020378
-----		
418.1 PETROLEUM HYDROCARBONS	<100	<100



Detection Limits  
Environmental Quality Parameters  
Samples No.: 88020371 - 88020378

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/Kg	100

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ENGINEERING SCIENCE INC.  
04/18/88

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ANALYSIS REPORT

WORK ORDER NUMBER: 534  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 03/08/88

APPROVED BY

*RWBurton*  
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 3, UNITS: ug/L

	VF,2-W5,GW1,ES	VF,2-1,GW1,ES	VF,2-2,GW1,ES	VF,1-W3,GW1,ES	VF,10-W1,GW1,ES	VF,2-W3,GW1,ES
TEST COMPOUND	88030551	88030552	88030553	88030554	88030555	88030556
418.1 PETROLEUM HYDROCARBONS	<1	<1	<1	1.6	<1	<1
TOTAL DISSOLVED SOLIDS	48.0	93.0	94.0	215		70.0

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88030551 - 88030562

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT

WORK ORDER NUMBER: 536  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 03/09/88

APPROVED BY *RWB*  
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 35)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 3, UNITS: mg/L

	VF,12-W3,GW1,ES	VF,1-W2,GW1,ES	VF,ET-1,GW1,ES	VF,ET-2,GW1,ES	VF,ET-3,GW1,ES
TEST COMPOUND	88030565	88030566	88030567	88030568	88030569
418.1 PETROLEUM HYDROCARBONS	<1	<1	<1	<1	26
TOTAL DISSOLVED SOLIDS	<10	82.0	89.0	57.0	220

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88030565 - 88030569

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/L	1
E160.1 Total Dissolved Solids	mg/L	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ENGINEERING SCIENCE INC.

04/13/88

ANALYSIS REPORT

WORK ORDER NUMBER: 472  
 JOB NUMBER : ZB0000000400  
 WORK ORDER DATE : 01/28/88

APPROVED BY

*RWB*

Lab Supervisor

REPORT DATA:  
 ES ATLANTA/VOLK FIELD ANGB  
 57 EXECUTIVE PARK STE. 590  
 ATLANTA, GA 30329  
 JIMMY DUNCAN

CLIENT DATA:  
 ES ATLANTA/VOLK FIELD ANGB ( 35 )  
 57 EXECUTIVE PARK STE. 590  
 ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
 CONTACT : JIMMY DUNCAN  
 (404)-325-0770

TASK: 3, UNITS: ug/kg

TEST COMPOUND	VF1,B-7,SS-3, 8.5'	VF1,B-6,SS-2, 3.5'	VF1,B-6,SS-3, 8.5'	VF1,B-7,SS-1, 0'	VF1,B-7,SS-2, 3.5'	VF1,B-5,SS-1,0'
	88010204	88010205	88010206	88010207	88010208	88010209
418.1 PETROLEUM HYDROCARBONS	<100	3000	3200	<100	<100	280

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

049.1 3, UNITS: mg/Kg

TEST COMPOUND	VF1, B-5, SS-2, 3.5'	VF1, B-5, SS-3, 10.0'	VF1, B-5, SS-1, .
419.1 PETROLEUM HYDROCARBONS	500	420	830

Detection Limits  
Environmental Quality Parameters  
Samples No.: 88010204 - 88010212

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
418.1 Petroleum Hydrocarbons	mg/Kg	100

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.



04/18/88

ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 3, UNITS: ug/L

VF, 2-W4, 6W1, ES    VF, 10-W2, 6W1, ES    VF, 10-W3, 6W1, ES    VF, 10-W5, 6W1, ES    VF, 10-W4, 6W1, ES    VF, 12-W2, 6W1, ES

TEST COMPOUND	38030557	38030558	38030559	38030560	38030561	38030562
419.1 PETROLEUM HYDROCARBONS	<1	*	<1	<1	<1	<1
TOTAL DISSOLVED SOLIDS	59.0					110

**ANALYTICAL RESULTS FOR PCBS**

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,B-3,SS-3, 8.5'	VF1,B-21,SS-1, 1.0'	VF1,B-22,SS-1, 0.5'	VF1,B-4,SS-1, 0.5'	VF1,B-1,SS-1, 0.5'	VF1,B-1,SS-2, 3.5'
	88010186	88010187	88010188	88010189	88010190	88010191
ALDRIN	NT	NT	NT	NT	NT	NT
ALPHA-BHC	NT	NT	NT	NT	NT	NT
BETA-BHC	NT	NT	NT	NT	NT	NT
DELTA-BHC	NT	NT	NT	NT	NT	NT
GAMMA-BHC	NT	NT	NT	NT	NT	NT
CHLOROANE	NT	NT	NT	NT	NT	NT
4,4'-DDD	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4'-DDT	NT	NT	NT	NT	NT	NT
DIELDRIN	NT	NT	NT	NT	NT	NT
ENDOSULFAN I	NT	NT	NT	NT	NT	NT
ENDOSULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

ENGINEERING SCIENCE INC.  
04/18/88

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ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,B-1,SS-3, 3.5'	VF1,B-2,SS-1, 0.5'	VF1,B-2,SS-2, 3.5'	VF1,B-2,SS-3, 3.5'	VF1,B-3,SS-1, 1.0'	VF1,B-3,SS-2, 3.5'
	88010192	88010193	88010194	88010195	88010196	88010197
ALDRIN	NT	NT	NT	NT	NT	NT
ALPHA-BHC	NT	NT	NT	NT	NT	NT
BETA-BHC	NT	NT	NT	NT	NT	NT
DELTA-BHC	NT	NT	NT	NT	NT	NT
GAMMA-BHC	NT	NT	NT	NT	NT	NT
CHLORDANE	NT	NT	NT	NT	NT	NT
4,4'-DDD	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4'-DDT	NT	NT	NT	NT	NT	NT
DIELDRIN	NT	NT	NT	NT	NT	NT
ENDOSULFAN I	NT	NT	NT	NT	NT	NT
ENDOSULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,B-4,SS-2, 3.5' 88010198	VF1,B-4,SS-3, 8.5' 88010199
ALDRIN	NT	NT
ALPHA-BHC	NT	NT
BETA-BHC	NT	NT
DELTA-BHC	NT	NT
GAMMA-BHC	NT	NT
CHLORDANE	NT	NT
4,4'-DDE	NT	NT
4,4'-DDE	NT	NT
4,4'-DDT	NT	NT
DIELDRIN	NT	NT
ENDOSULFAN I	NT	NT
ENDOSULFAN II	NT	NT
ENDOSULFAN SULFATE	NT	NT
ENDRIN	NT	NT
ENDRIN ALDEHYDE	NT	NT
HEPTACHLOR	NT	NT
HEPTACHLOR EPOXIDE	NT	NT
KEPONE	NT	NT
METHOXYCHLOR	NT	NT
TOXAPHENE	NT	NT
PCB-1016	ND	ND
PCB-1221	ND	ND
PCB-1232	ND	ND
PCB-1242	ND	ND
PCB-1248	ND	ND
PCB-1254	ND	ND
PCB-1260	ND	ND

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88010186-0187, 88010193-0198

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88010188-0192, 88010199

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,B-7,SS-3, 3.5'	VF1,B-6,SS-2, 3.5'	VF1,B-6,SS-3, 3.5'	VF1,B-7,SS-1, 0'	VF1,B-7,SS-2, 3.5'	VF1,B-5,SS-1,0'
	88010204	88010205	88010206	88010207	88010208	88010209
ALDRIN	NT	NT	NT	NT	NT	NT
ALPHA-BHC	NT	NT	NT	NT	NT	NT
BETA-BHC	NT	NT	NT	NT	NT	NT
DELTA-BHC	NT	NT	NT	NT	NT	NT
GAMMA-BHC	NT	NT	NT	NT	NT	NT
CHLORDANE	NT	NT	NT	NT	NT	NT
4,4'-DDD	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4'-DDT	NT	NT	NT	NT	NT	NT
DIELDRIN	NT	NT	NT	NT	NT	NT
ENDOSULFAN I	NT	NT	NT	NT	NT	NT
ENDOSULFAN II	NT	NT	NT	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND



ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,B-5,SS-2, 3.5'	VF1,B-5,SS-3, 10.0'	VF1,B-6,SS-1, 0'
	88010210	88010211	88010212
ALDRIN	NT	NT	NT
ALPHA-BHC	NT	NT	NT
BETA-BHC	NT	NT	NT
DELTA-BHC	NT	NT	NT
GAMMA-BHC	NT	NT	NT
CHLORDANE	NT	NT	NT
4,4'-DDD	NT	NT	NT
4,4'-DDE	NT	NT	NT
4,4'-DDT	NT	NT	NT
DIELDRIN	NT	NT	NT
ENDOSULFAN I	NT	NT	NT
ENDOSULFAN II	NT	NT	NT
ENDOSULFAN SULFATE	NT	NT	NT
ENDRIN	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT
HEPTACHLOR	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT
KEPONE	NT	NT	NT
METHOXYCHLOR	NT	NT	NT
TOXAPHENE	NT	NT	NT
PCB-1016	ND	ND	ND
PCB-1221	ND	ND	ND
PCB-1232	ND	ND	ND
PCB-1242	ND	ND	ND
PCB-1248	ND	ND	ND
PCB-1254	ND	ND	ND
PCB-1260	ND	ND	ND

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88010204-0205, 88010207-0210

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88010206, 88010211-0212

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 4, UNITS: ug/KG, GROUP 8080

TEST COMPOUND	VF1,B-26,SS-1, 0'	VF1,B-9,SS-2, 3.5'	VF1,B-9,SS-3, 8.5'	VF1,B-8,SS-1, 0'	VF1,B-8,SS-2, 3.5'	VF1,B-8,SS-3, 8.5'
	88010214	88010215	88010216	88010217	88010218	88010219
ALDRIN	NT	NT	NT	NT	NT	NT
ALPHA-BHC	NT	NT	NT	NT	NT	NT
BETA-BHC	NT	NT	NT	NT	NT	NT
DELTA-BHC	NT	NT	NT	NT	NT	NT
GAMMA-BHC	NT	NT	NT	NT	NT	NT
CHLORDANE	NT	NT	NT	NT	NT	NT
4,4'-DDD	NT	NT	NT	NT	NT	NT
4,4'-DDE	NT	NT	NT	NT	NT	NT
4,4'-DDT	NT	NT	NT	NT	NT	NT
DIELDRIN	NT	NT	NT	NT	NT	NT
ENDOSULFAM I	NT	NT	NT	NT	NT	NT
ENDOSULFAM II	NT	NT	NT	NT	NT	NT
ENDOSULFAM SULFATE	NT	NT	NT	NT	NT	NT
ENDRIN	NT	NT	NT	NT	NT	NT
ENDRIN ALDEHYDE	NT	NT	NT	NT	NT	NT
HEPTACHLOR	NT	NT	NT	NT	NT	NT
HEPTACHLOR EPOXIDE	NT	NT	NT	NT	NT	NT
KEPONE	NT	NT	NT	NT	NT	NT
METHOXYCHLOR	NT	NT	NT	NT	NT	NT
TOXAPHENE	NT	NT	NT	NT	NT	NT
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TABLE: 4, UNITS: ug/KG, GROUP 2080

TEST COMPOUND	VF1,3-9,SS-1, 01 38010220
ALDRIN	NT
ALPHA-BHC	NT
BETA-BHC	NT
DELTA-BHC	NT
GAMMA-BHC	NT
CHLORDANE	NT
4,4'-DDD	NT
4,4'-DDE	NT
4,4'-DDT	NT
DIELDRIN	NT
ENDOSULFAN I	NT
ENDOSULFAN II	NT
ENDOSULFAN SULFATE	NT
ENDRIN	NT
ENDRIN ALDEHYDE	NT
HEPTACHLOR	NT
HEPTACHLOR EPOXIDE	NT
KEPONE	NT
METHOXYCHLOR	NT
TOXAPHENE	NT
PCB-1016	ND
PCB-1221	ND
PCB-1232	ND
PCB-1242	ND
PCB-1248	ND
PCB-1254	ND
PCB-1260	ND

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88010214, 88010216, 88010218-0220

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

Detection Limits  
PCBs  
EPA 608/9080  
Samples No.: 88010215, 88010217

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KG, GROUP PCB

TEST COMPOUND	VF1,B-10,SS-1, 0.5' 88020289	VF1,B-27,SS-1, 0.5' 88020290	VF1,B-10,SS-2, 3.5' 88020291	VF1,B-10,SS-3, 0.5' 88020292	VF1,B-11,SS-1, 1.0' 88020293	VF1,B-11,SS-2 3.5' 88020294
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND



ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 4, UNITS: ug/KG, GROUP PCB

TEST COMPOUND	VF1,B-11,SS-3, 8.5' 88020295	VF1,B-12,SS-1 1.0' 88020296	VF1,B-12,SS-2, 3.5' 88020297	VF1,B-12,SS-3, 8.5' 88020298	VF1,B-13,SS-1, 1.5' 88020299	VF1,B-28,SS-1, 1.5' 88020300
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

Detection Limits

PCBs

EPA 608/8080

Samples No.: 88020291, 88020293-0294, 88020296-0300

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88020289-0290, 88020292, 88020295

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	100 ug/Kg
PCB-1221	100
PCB-1232	100
PCB-1242	100
PCB-1248	100
PCB-1254	200
PCB-1260	200

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP PCB

TEST COMPOUND	VF1,B-14,SS-3, 3.5'	VF1,B-15,SS-1, 0.5'	VF1,B-15,SS-2, 3.5'	VF1,B-15,SS-3, 8.5'	VF1,B-13,SS-2, 3.5'	VF1,B-13,SS-3, 8.5'
PCB-1016	ND	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND	ND

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## ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 4, UNITS: ug/KG, GROUP PCB

TEST COMPOUND	VF1,B-14,SS-1, 1.0' 88020377	VF1,B-14,SS-2, 3.5' 88020378
PCB-1016	ND	ND
PCB-1221	ND	ND
PCB-1232	ND	ND
PCB-1242	ND	ND
PCB-1248	ND	ND
PCB-1254	ND	ND
PCB-1260	ND	ND

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88020371 - 88020378

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	10 ug/Kg
PCB-1221	10
PCB-1232	10
PCB-1242	10
PCB-1248	10
PCB-1254	10
PCB-1260	10

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 538

TASK: 4, UNITS: ug/L, GROUP PCB

	VF,ET-5,GW1,ES	VF,ET-4,GW1,ES	VF,ET-7,GW1,ES	VF,ET-6,GW1,ES
TEST COMPOUND	88030572	88030573	88030575	88030576
PCB-1016	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88030572-0573, 88030575-0576

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.



ANALYSIS REPORT FOR WORK ORDER NUMBER 536

TASK: 4, UNITS: ug/L, GROUP PCB

	VF,12-W3,GW1,ES	VF,1-W2,GW1,ES	VF,ET-1,GW1,ES	VF,ET-2,GW1,ES	VF,ET-3,GW1,ES
TEST COMPOUND	88030565	88030566	88030567	88030568	88030569
PCB-1016	ND	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND	ND

Revised Report 6-27-88

Detection Limits

PCBs

EPA 608/8080

Samples No.: 88030565 - 88030569

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

ANALYSIS REPORT FOR WORK ORDER NUMBER 530

TASK: 4, UNITS: ug/L, GROUP PCB

	VF, 1-W4, GW1, ES	VF, 1-W5, GW1, ES	VF, 1-W1, GW1, ES
TEST COMPOUND	88030537	88030538	88030540
-----	-----	-----	-----
PCB-1016	ND	ND	ND
PCB-1221	ND	ND	ND
PCB-1232	ND	ND	ND
PCB-1242	ND	ND	ND
PCB-1248	ND	ND	ND
PCB-1254	ND	ND	ND
PCB-1260	ND	ND	ND

Detection Limits  
PCBs  
EPA 608/8080  
Samples No.: 88030537-0538, 88030540

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

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ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 4, UNITS: ug/L, GROUP PCB

VF, 1-W3, GW1, ES

NET COMPOUND

88030554

PCB-1016

ND

PCB-1021

ND

PCB-1032

ND

PCB-1042

ND

PCB-1048

ND

PCB-1154

ND

PCB-1160

ND

Detection Limits  
PCBs  
EPA 608/8080  
Sample No.: 88030554

<u>Compound</u>	<u>Detection Limits</u>
PCB-1016	5.0 ug/L
PCB-1221	5.0
PCB-1232	5.0
PCB-1242	5.0
PCB-1248	5.0
PCB-1254	10.0
PCB-1260	10.0

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

**ANALYTICAL RESULTS FOR  
BASE/NEUTRAL ACID EXTRACTABLES**

PRIORITY POLLUTANT ANALYSIS  
 PESTICIDES & PCBS - SW 8270  
 MATRIX: SOIL

Client: ES Atlanta  
 Attn: Ernie Daly  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Compound	Detection Limits	
Aldrin	200	ug/KG
Alpha-BHC	200*	ug/KG
Beta-BHC	400	ug/KG
Delta-BHC	300	ug/KG
Gamma-BHC (Lindane)	200*	ug/KG
Chlordane	4000	ug/KG
4,4'-DDD	300	ug/KG
4,4'-DDE	600	ug/KG
4,4'-DDT	500	ug/KG
Dieldrin	300	ug/KG
Endosulfan I	800*	ug/KG
Endosulfan II	800*	ug/KG
Endosulfan sulfate	600	ug/KG
Endrin	800*	ug/KG
Endrin aldehyde	300*	ug/KG
Endrin Ketone	300*	ug/KG
Heptachlor	200	ug/KG
Heptachlor epoxide	200	ug/KG
Methoxychlor	300*	ug/KG
Toxaphene	4000	ug/KG
Arochlor-1016	4000	ug/KG
Arochlor-1221	4000	ug/KG
Arochlor-1232	4000	ug/KG
Arochlor-1242	4000	ug/KG
Arochlor-1248	4000	ug/KG
Arochlor-1254	4000	ug/KG
Arochlor-1260	4000	ug/KG

\* Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.



PRIORITY POLLUTANT ANALYSIS  
 BASE NEUTRALS - SW 8270  
 MATRIX: SOIL

Client: ES Atlanta  
 Attn: Ernie Daly  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Compound	Detection Limits	
Acetophenone	660*	ug/KG
Aniline	660*	ug/KG
4-Aminobiphenyl	660*	ug/KG
4-Chloroaniline	1300	ug/KG
1-Chloronaphthalene	660*	ug/KG
Dibenzofuran	660	ug/KG
p-Dimethylaminoazobenzene	660*	ug/KG
7,12-Dimethylbenz(a)anthracene	660*	ug/KG
a-,a-Dimethylphenethylamine	1300*	ug/KG
Diphenylamine	660*	ug/KG
1,2-Diphenylhydrazine	660*	ug/KG
Ethyl methanesulfonate	660*	ug/KG
3-Methylcholanthrene	660*	ug/KG
Methyl methanesulfonate	660*	ug/KG
3-Methylcholanthrene	660*	ug/KG
2-Methylnaphthalene	660	ug/KG
1-Naphthylamine	660*	ug/KG
2-Naphthylamine	660*	ug/KG
2-Nitroaniline	3300	ug/KG
3-Nitroaniline	3300	ug/KG
4-Nitroaniline	3300	ug/KG
N-Nitroso-di-n-butylamine	660*	ug/KG
N-Nitrosopiperidine	660*	ug/KG
Pentachlorobenzene	660*	ug/KG
Pentachloronitrobenzene	660*	ug/KG
Phenacetin	660*	ug/KG
2-Picoline	660*	ug/KG
Pronamide	10000	ug/KG
1,2,4,5-Tetrachlorobenzene	660*	ug/KG

\* Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

PRIORITY POLLUTANT ANALYSIS  
ACID EXTRACTABLES - SW 8270  
MATRIX: SOIL

Client: ES Atlanta  
Attn: Ernie Daly  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Compound	Detection Limits	
2-Chlorophenol	660	ug/KG
2-Nitrophenol	660	ug/KG
Phenol	660	ug/KG
2,4-Dimethylphenol	660	ug/KG
2,4-Dichlorophenol	660	ug/KG
2,4,6-Trichlorophenol	660	ug/KG
4-Chloro-3-methylphenol	1300	ug/KG
2,4-Dinitrophenol	3300	ug/KG
2,6-Dichlorophenol	660*	ug/KG
2-Methyl-4,6-Dinitrophenol	3300	ug/KG
Pentachlorophenol	3300	ug/KG
4-Nitrophenol	3300	ug/KG
Benzoic Acid	3300	ug/KG
2-Methylphenol	660	ug/KG
3- & 4-Methylphenol	660	ug/KG
2,3,4,6-Tetrachlorophenol	660*	ug/KG
2,4,5-Trichlorophenol	660	ug/KG

\* Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 3

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Folk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880190  
 Sample No.: UF1 B-1 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 840  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
1,3-Dichlorobenzene	6.6	ND	
1,4-Dichlorobenzene	6.6	ND	
Hexachloroethane	6.6	ND	
Bis(2-chloroethyl)ether	6.6	ND	
1,2-Dichlorobenzene	6.6	ND	
N-Nitrosodimethylamine	25	ND	
Bis(2-chloroisopropyl)ether	6.6	ND	
N-Nitrosodi-n-propyl amine	6.6	ND	
Hexachlorobutadiene	6.6	ND	
1,2,4-Trichlorobenzene	6.6	ND	
Nitrobenzene	6.6	ND	
Isophorone	6.6	ND	
Naphthalene	6.6	ND	
Bis(2-chloroethoxy)methane	6.6	ND	
2-Chloronaphthalene	6.6	ND	
Hexachlorocyclopentadiene	6.6	ND	
Acenaphthylene	6.6	ND	
Acenaphthene	6.6	ND	
Dimethyl phthalate	6.6	ND	
2,6-Dinitrotoluene	6.6	ND	
Fluorene	6.6	ND	
2,4-Dinitrotoluene	6.6	ND	
Diethyl phthalate	6.6	ND	
N-Nitrosodiphenylamine	6.6	ND	
Hexachlorobenzene	6.6	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. ....  
 Job No. AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380190  
 Sample No.: UF1 B-1 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 340  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	6.6	ND	
Anthracene	6.6	ND	
Dibutyl phthalate	6.6	ND	
Fluoranthene	6.6	ND	
4-Chlorophenyl phenyl ether	6.6	ND	
Pyrene	6.6	ND	
Butyl Benzyl phthalate	6.6	ND	
Bis(2-ethylhexyl) phthalate	6.6	ND	
Chrysene	6.6	ND	
4-Bromophenyl phenyl ether	6.6	ND	
Benzo(a)anthracene	6.6	ND	
Di-n-octylphthalate	6.6	ND	
Benzo(b)fluoranthene	6.6	ND	
Benzo(k)fluoranthene	6.6	ND	
Benzidine	60	ND	
3,3'-Dichlorobenzidine	13	ND	
Benzo(a)pyrene	6.6	ND	
Indeno(1,2,3-cd)pyrene	6.6	ND	
Dibenzo(a,h)anthracene	6.6	ND	
Benzo(ghi)perylene	6.6	ND	
Benzyl Alcohol	13	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No. AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880190  
 Sample No.: UF1 B-1 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 940  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	13	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	6.6	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	6.6	9.7
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	33	ND
3-Nitroaniline	33	ND
4-Nitroaniline	33	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 27, 1988  
Date Reported: March 3, 1988  
DATE REISSUED: March 10, 1988

P.O. No. 1111111111  
Job No. AT077

FOR ES: Atlanta/Folk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880190  
Sample No.: UF1 B-1 SS1, 0.5'  
Date Sampled: 1-26-88  
Time Sampled: 340  
Date Extracted: 2-1-88  
Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
			mg/kg
Alpha-BHC	--*		ND
Gamma-BHC	---		ND
Beta-BHC	4		ND
Heptachlor	2		ND
Delta-BHC	3		ND
Aldrin	2		ND
Heptachlor epoxide	2		ND
Endosulfan I	--*		ND
Dieldrin	3		ND
4,4'-DDE	6		ND
Endrin	--*		ND
Endosulfan II	--*		ND
4,4'-DDD	3		ND
4,4'-DDT	5		ND
Endosulfan Sulfate	6		ND
Endrin aldehyde	--*		ND
Endrin Ketone	--*		ND
Chlordane	40		ND
Methoxychlor	--*		ND
Toxaphene	40		ND
Aroclor-1016	40		ND
Aroclor-1221	40		ND
Aroclor-1232	40		ND
Aroclor-1242	40		ND
Aroclor-1248	40		ND
Aroclor-1254	40		ND
Aroclor-1260	40		ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 3270  
 Matrix: Soil

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Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. 1000000000  
 Job No. AT077

FOR: ES Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980190  
 Sample No.: UF1 B-1 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 840  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
		mg/kg
2-Chlorophenol	6.6	ND
2-Nitrophenol	6.6	ND
Phenol	6.6	ND
2,4-Dimethylphenol	6.6	ND
2,4-Dichlorophenol	6.6	ND
2,4,6-Trichlorophenol	6.6	ND
4-Chloro-3-methylphenol	13	ND
2,4-Dinitrophenol	33	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	33	ND
Pentachlorophenol	33	ND
4-Nitrophenol	33	ND
Benzoic Acid	33	ND
2-Methylphenol	6.6	ND
3- & 4-Methylphenol	6.6	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	6.6	ND

*Luc A Veig*  
 Analyst

*Al W. Burton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
Priority Pollutant Analysis  
Base Neutrals - SW 9270  
Matrix: Soil

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Date Received: January 27, 1988  
Date Reported: March 3, 1988  
DATE REISSUED: March 10, 1988

P.O. No.:  
Job No.: RT077

FOR: ES Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980191  
Sample No.: UF1 B-1 SS-2, 3.5'  
Date Sampled: 1-26-88  
Time Sampled: 910  
Date Extracted: 2-1-88  
Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	6.6	ND
1,4-Dichlorobenzene	6.6	ND
Hexachloroethane	6.6	ND
Bis(2-chloroethyl)ether	6.6	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)ether	6.6	ND
N-Nitrosodi-n-propyl amine	6.6	ND
Hexachlorobutadiene	6.6	ND
1,2,4-Trichlorobenzene	6.6	ND
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	7.3
Bis(2-chloroethoxy)methane	6.6	ND
2-Chloronaphthalene	6.6	ND
Hexachlorocyclopentadiene	6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6.6	ND
Hexachlorobenzene	6.6	ND



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. ....  
 Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880191  
 Sample No. UF1 B-1 SS-2, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 910  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	6.6	ND	
Anthracene	6.6	ND	
Dibutyl phthalate	6.6	ND	
Fluoranthene	6.6	ND	
4-Chlorophenyl phenyl ether	6.6	ND	
Pyrene	6.6	ND	
Butyl Benzyl phthalate	6.6	ND	
Bis(2-ethylhexyl) phthalate	6.6	ND	
Chrysene	6.6	ND	
4-Bromophenyl phenyl ether	6.6	ND	
Benzo(a)anthracene	6.6	ND	
Di-n-octylphthalate	6.6	ND	
Benzo(b)fluoranthene	6.6	ND	
Benzo(k)fluoranthene	6.6	ND	
Benzidine	60	ND	
3,3'-Dichlorobenzidine	13	ND	
Benzo(a)pyrene	6.6	ND	
Indeno(1,2,3-cd)pyrene	6.6	ND	
Dibenzo(a,h)anthracene	6.6	ND	
Benzo(ghi)perylene	6.6	ND	
Benzyl Alcohol	13	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880191  
 Sample No.: OF1 B-1 SS-2, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 910  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	13	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	6.6	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	6.6	15
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	33	ND
3-Nitroaniline	33	ND
4-Nitroaniline	33	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 27, 1988  
Date Reported: March 3, 1988  
DATE REISSUED: March 10, 1988

P. O. No. 111111  
Job No. AT077

FOR: ES Atlanta Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880191  
Sample No.: OF1 B-1 SS-2, 3, 5'  
Date Sampled: 1-26-88  
Time Sampled: 910  
Date Extracted: 2-1-88  
Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	3	ND
Aldrin	2	ND
Heptachlor epoxide	2	ND
Endosulfan I	--*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	40	ND
Methoxychlor	--*	ND
Toxaphene	40	ND
Aroclor-1016	40	ND
Aroclor-1221	40	ND
Aroclor-1232	40	ND
Aroclor-1242	40	ND
Aroclor-1248	40	ND
Aroclor-1254	40	ND
Aroclor-1260	40	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 9270  
 Matrix: Soil

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Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

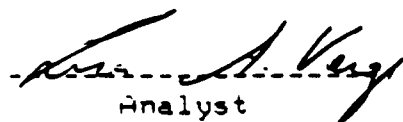
P.O. No. ....  
 Job No. : AT077


FOR: ES Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880191  
 Sample No.: UF1 B-1 SS-2, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 310  
 Date Extracted: 2-1-89  
 Date Analyzed: 2-12-89

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
2-Chlorophenol	6.6	ND	
2-Nitrophenol	6.6	ND	
Phenol	6.6	ND	
2,4-Dimethylphenol	6.6	ND	
2,4-Dichlorophenol	6.6	ND	
2,4,6-Trichlorophenol	6.6	ND	
4-Chloro-3-methylphenol	13	ND	
2,4-Dinitrophenol	33	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	33	ND	
Pentachlorophenol	33	ND	
4-Nitrophenol	33	ND	
Benzoic Acid	33	ND	
2-Methylphenol	6.6	ND	
3- & 4-Methylphenol	6.6	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	6.6	ND	

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199  
Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

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Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880192  
 Sample No.: UF1 B-1 SS-3, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 940  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
1,3-Dichlorobenzene	6.6	ND	
1,4-Dichlorobenzene	6.6	ND	
Hexachloroethane	6.6	ND	
Bis(2-chloroethyl)ether	6.6	ND	
1,2-Dichlorobenzene	6.6	ND	
N-Nitrosodimethylamine	25	ND	
Bis(2-chloroisopropyl)ether	6.6	ND	
N-Nitrosodi-n-propyl amine	6.6	ND	
Hexachlorobutadiene	6.6	ND	
1,2,4-Trichlorobenzene	6.6	ND	
Nitrobenzene	6.6	ND	
Isophorone	6.6	ND	
Naphthalene	6.6	7.3	
Bis(2-chloroethoxy)methane	6.6	ND	
2-Chloronaphthalene	6.6	ND	
Hexachlorocyclopentadiene	6.6	ND	
Acenaphthylene	6.6	ND	
Acenaphthene	6.6	ND	
Dimethyl phthalate	6.6	ND	
2,6-Dinitrotoluene	6.6	ND	
Fluorene	6.6	ND	
2,4-Dinitrotoluene	6.6	ND	
Diethyl phthalate	6.6	ND	
N-Nitrosodiphenylamine	6.6	ND	
Hexachlorobenzene	6.6	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880192  
 Sample No.: UF1 B-1 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 940  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	6.6	ND	
Anthracene	6.6	ND	
Dibutyl phthalate	6.6	ND	
Fluoranthene	6.6	ND	
4-Chlorophenyl phenyl ether	6.6	ND	
Pyrene	6.6	ND	
Butyl Benzyl phthalate	6.6	ND	
Bis(2-ethylhexyl) phthalate	6.6	ND	
Chrysene	6.6	ND	
4-Bromophenyl phenyl ether	6.6	ND	
Benzo(a)anthracene	6.6	ND	
Di-n-octylphthalate	6.6	ND	
Benzo(b)fluoranthene	6.6	ND	
Benzo(k)fluoranthene	6.6	ND	
Benzidine	60	ND	
3,3'-Dichlorobenzidine	13	ND	
Benzo(a)pyrene	6.6	ND	
Indeno(1,2,3-cd)pyrene	6.6	ND	
Dibenzo(a,h)anthracene	6.6	ND	
Benzo(ghi)perylene	6.6	ND	
Benzyl Alcohol	13	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980192  
 Sample No.: UF1 B-1 SS-3, 9.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 940  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	13	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	6.6	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	6.6	14
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	33	ND
3-Nitroaniline	33	ND
4-Nitroaniline	33	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 27, 1988  
Date Reported: March 3, 1988  
DATE REISSUED: March 10, 1988

P.O. No. 1000000000  
Job No. AT077

FOR: ES Atlanta/Oolk Field ANGB  
Address 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980192  
Sample No.: UF1 B-1 SS-3, 8.5'  
Date Sampled: 1-26-88  
Time Sampled: 940  
Date Extracted: 2-1-88  
Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	---	ND	
Beta-BHC	4	ND	
Heptachlor	2	ND	
Delta-BHC	3	ND	
Aldrin	2	ND	
Heptachlor epoxide	2	ND	
Endosulfan I	--*	ND	
Dieldrin	3	ND	
4,4'-DDE	6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	3	ND	
4,4'-DDT	5	ND	
Endosulfan Sulfate	6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	40	ND	
Methoxychlor	--*	ND	
Toxaphene	40	ND	
Aroclor-1016	40	ND	
Aroclor-1221	40	ND	
Aroclor-1232	40	ND	
Aroclor-1242	40	ND	
Aroclor-1248	40	ND	
Aroclor-1254	40	ND	
Aroclor-1260	40	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 9270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

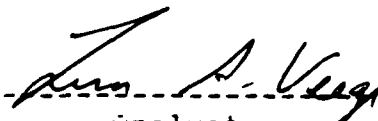
P.O. No. ....  
 Job No. : AT077

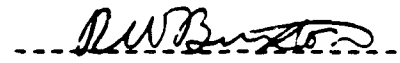
FOR: ES Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880192  
 Sample No.: UF1 B-1 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 940  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	6.6	ND
2-Nitrophenol	6.6	ND
Phenol	6.6	ND
2,4-Dimethylphenol	6.6	ND
2,4-Dichlorophenol	6.6	ND
2,4,6-Trichlorophenol	6.6	ND
4-Chloro-3-methylphenol	13	ND
2,4-Dinitrophenol	33	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	33	ND
Pentachlorophenol	33	ND
4-Nitrophenol	33	ND
Benzoic Acid	33	ND
2-Methylphenol	6.6	ND
3- & 4-Methylphenol	6.6	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	6.6	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**CASE NARRATIVE**

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880193  
 Sample No.: UF1 B-2 SS-1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1040  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 3

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880193  
 Sample No.: UF1 B-2 SS-1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1040  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS	
	Limit mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980193  
 Sample No.: UF1 B-2 SS-1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1040  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880193  
Sample No.: UF1 B-2 SS-1, 0.5'  
Date Sampled: 1-26-88  
Time Sampled: 1040  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 9270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

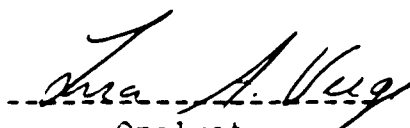
P.O. No.: .....  
 Job No.: AT077

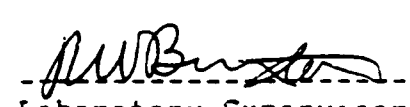
FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880193  
 Sample No.: UF1 B-2 SS-1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1040  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
		mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



CASE NARRATIVE

Sample(s) No.: 88010186-0199  
Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880194  
 Sample No.: UF1 B-2 SS-2, 3.5  
 Date Sampled: 1-26-88  
 Time Sampled: 1110  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880194  
 Sample No.: UF1 B-2 SS-2, 3.5  
 Date Sampled: 1-26-88  
 Time Sampled: 1110  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880194  
 Sample No.: UF1 B-2 SS-2, 3.5  
 Date Sampled: 1-26-88  
 Time Sampled: 1110  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880194  
Sample No.: UF1 B-2 SS-2, 3.5  
Date Sampled: 1-26-88  
Time Sampled: 1110  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

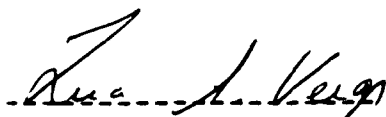
P.O. No.: .....  
 Job No.: AT077

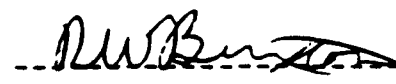
FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880194  
 Sample No.: UF1 B-2 SS-2, 3.5  
 Date Sampled: 1-26-88  
 Time Sampled: 1110  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880195  
 Sample No.: UF1 B-2 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1145  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880195  
 Sample No.: UF1 B-2 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1145  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS	
	Limit mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 37 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880195  
 Sample No.: UF1 B-2 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1145  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880195  
Sample No.: UF1 B-2 SS-3, 8.5'  
Date Sampled: 1-26-88  
Time Sampled: 1145  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

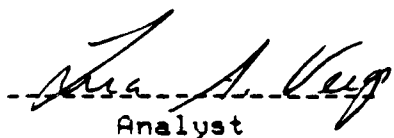
P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880195  
 Sample No.: UF1 B-2 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1145  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880196  
 Sample No.: UF1 B-3 SS-1 1.0'  
 Date Sampled: 1-26-88  
 Time Sampled: 1210  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

page 2 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No. ....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880196  
Sample No.: UF1 B-3 SS-1 1.0'  
Date Sampled: 1-26-88  
Time Sampled: 1210  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880196  
 Sample No.: UF1 B-3 SS-1 1.0'  
 Date Sampled: 1-26-88  
 Time Sampled: 1210  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880196  
Sample No.: UF1 B-3 SS-1 1.0'  
Date Sampled: 1-26-88  
Time Sampled: 1210  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No. ....  
 Job No.: AT077

FOR: ES: Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880196  
 Sample No.: UF1 B-3 SS-1 1.0'  
 Date Sampled: 1-26-88  
 Time Sampled: 1210  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Lisa A. Vieg*  
 Analyst

*RWB*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010178 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil

page 1 of 3

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880197  
Sample No.: UF1 B-3 SS-2 3.5'  
Date Sampled: 1-26-88  
Time Sampled: 1250  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880197  
 Sample No.: UF1 B-3 SS-2 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1250  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880197  
 Sample No.: UF1 B-3 SS-2 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1250  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880197  
Sample No.: UF1 B-3 SS-2 3 5'  
Date Sampled: 1-26-88  
Time Sampled: 1250  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	—*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880197  
 Sample No.: UF1 B-3 SS-2 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1250  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Lisa A. Veig*  
 Analyst

*[Signature]*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



CASE NARRATIVE

Sample(s) No.: 88010186-0199  
Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880186  
 Sample No.: UF1 B-3 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1405  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-8-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 3

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No. :  
 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980186  
 Sample No.: UF1 B-3 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1405  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No. ....  
 Job No. : RT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880186  
 Sample No.: UF1 B-3 SS-3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1405  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-8-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880186  
Sample No.: VF1 B-3 SS-3, 8.5'  
Date Sampled: 1-26-88  
Time Sampled: 1405  
Date Extracted: 2-1-88  
Date Analyzed: 2-8-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	—*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

Date Received: January 27, 1988  
Date Reported: March 3, 1988

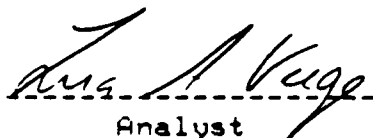
P.O. No.:  
Job No.: AT077

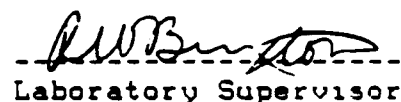
FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880186  
Sample No.: UF1 B-3 SS-3, 8.5'  
Date Sampled: 1-26-88  
Time Sampled: 1405  
Date Extracted: 2-1-88  
Date Analyzed: 2-8-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
		mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199  
Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880189  
 Sample No.: UF1 B-4 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1430  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-16-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	33	ND
1,4-Dichlorobenzene	33	ND
Hexachloroethane	33	ND
Bis(2-chloroethyl)ether	33	ND
1,2-Dichlorobenzene	33	ND
N-Nitrosodimethylamine	130	ND
Bis(2-chloroisopropyl)ether	33	ND
N-Nitrosodi-n-propyl amine	33	ND
Hexachlorobutadiene	33	ND
1,2,4-Trichlorobenzene	33	ND
Nitrobenzene	33	ND
Isophorone	33	ND
Naphthalene	33	ND
Bis(2-chloroethoxy)methane	33	ND
2-Chloronaphthalene	33	ND
Hexachlorocyclopentadiene	33	ND
Acenaphthylene	33	ND
Acenaphthene	33	ND
Dimethyl phthalate	33	ND
2,6-Dinitrotoluene	33	ND
Fluorene	33	ND
2,4-Dinitrotoluene	33	ND
Diethyl phthalate	33	ND
N-Nitrosodiphenylamine	33	ND
Hexachlorobenzene	33	ND



Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

page 2 of 3

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880189  
Sample No.: UF1 B-4 SS1, 0.5'  
Date Sampled: 1-26-88  
Time Sampled: 1430  
Date Extracted: 2-1-88  
Date Analyzed: 2-16-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	33	ND	
Anthracene	33	ND	
Dibutyl phthalate	33	ND	
Fluoranthene	33	ND	
4-Chlorophenyl phenyl ether	33	ND	
Pyrene	33	ND	
Butyl Benzyl phthalate	33	ND	
Bis(2-ethylhexyl) phthalate	33	ND	
Chrysene	33	ND	
4-Bromophenyl phenyl ether	33	ND	
Benzo(a)anthracene	33	ND	
Di-n-octylphthalate	33	ND	
Benzo(b)fluoranthene	33	ND	
Benzo(k)fluoranthene	33	ND	
Benzidine	300	ND	
3,3'-Dichlorobenzidine	65	ND	
Benzo(a)pyrene	33	ND	
Indeno(1,2,3-cd)pyrene	33	ND	
Dibenzo(a,h)anthracene	33	ND	
Benzo(ghi)perylene	33	ND	
Benzyl Alcohol	65	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880189  
 Sample No.: UF1 B-4 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1430  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-16-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	65	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	33	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	33	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	160	ND
3-Nitroaniline	160	ND
4-Nitroaniline	160	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880189  
Sample No.: UF1 B-4 SS1, 0.5'  
Date Sampled: 1-26-88  
Time Sampled: 1430  
Date Extracted: 2-1-88  
Date Analyzed: 2-16-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	20	ND
Heptachlor	10	ND
Delta-BHC	15	ND
Aldrin	10	ND
Heptachlor epoxide	10	ND
Endosulfan I	--*	ND
Dieldrin	15	ND
4,4'-DDE	30	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	15	ND
4,4'-DDT	25	ND
Endosulfan Sulfate	30	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	200	ND
Methoxychlor	--*	ND
Toxaphene	200	ND
Aroclor-1016	200	ND
Aroclor-1221	200	ND
Aroclor-1232	200	ND
Aroclor-1242	200	ND
Aroclor-1248	200	ND
Aroclor-1254	200	ND
Aroclor-1260	200	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880189  
 Sample No.: UF1 B-4 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1430  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-16-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	33	ND
2-Nitrophenol	33	ND
Phenol	33	ND
2,4-Dimethylphenol	33	ND
2,4-Dichlorophenol	33	ND
2,4,6-Trichlorophenol	33	ND
4-Chloro-3-methylphenol	65	ND
2,4-Dinitrophenol	160	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	160	ND
Pentachlorophenol	160	ND
4-Nitrophenol	160	ND
Benzoic Acid	160	ND
2-Methylphenol	33	ND
3- & 4-Methylphenol	33	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	33	ND

*Lisa A. Vogel*  
 Analyst

*RWB*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199  
Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil

page 1 of 3

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380198  
Sample No.: UF1 B-4 SS 2, 3.5'  
Date Sampled: 1-26-88  
Time Sampled: 1530  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880198  
 Sample No.: UF1 B-4 SS 2, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1530  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS	
	Limit mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880198  
 Sample No.: UF1 B-4 SS 2, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1530  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No.:  
Job No.: AT077

FOR: ES Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880198  
Sample No.: UF1 B-4 SS 2, 3.5'  
Date Sampled: 1-26-88  
Time Sampled: 1530  
Date Extracted: 2-1-88  
Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

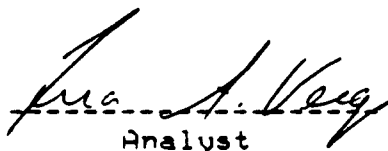
P.O. No. ....  
 Job No. : AT077


FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880198  
 Sample No.: UF1 B-4 SS 2, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1530  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880199  
 Sample No.: UF1 B-4 SS 3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1545  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	6.6	ND
1,4-Dichlorobenzene	6.6	ND
Hexachloroethane	6.6	ND
Bis(2-chloroethyl)ether	6.6	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)ether	6.6	ND
N-Nitrosodi-n-propyl amine	6.6	ND
Hexachlorobutadiene	6.6	ND
1,2,4-Trichlorobenzene	6.6	ND
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	ND
Bis(2-chloroethoxy)methane	6.6	ND
2-Chloronaphthalene	6.6	ND
Hexachlorocyclopentadiene	6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6.6	ND
Hexachlorobenzene	6.6	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta-Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880199  
 Sample No.: UF1 B-4 SS 3, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1545  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	6.6	ND
Anthracene	6.6	ND
Dibutyl phthalate	6.6	ND
Fluoranthene	6.6	ND
4-Chlorophenyl phenyl ether	6.6	ND
Pyrene	6.6	ND
Butyl Benzyl phthalate	6.6	ND
Bis(2-ethylhexyl) phthalate	6.6	ND
Chrysene	6.6	ND
4-Bromophenyl phenyl ether	6.6	ND
Benzo(a)anthracene	6.6	ND
Di-n-octylphthalate	6.6	ND
Benzo(b)fluoranthene	6.6	ND
Benzo(k)fluoranthene	6.6	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	13	ND
Benzo(a)pyrene	6.6	ND
Indeno(1,2,3-cd)pyrene	6.6	ND
Dibenzo(a,h)anthracene	6.6	ND
Benzo(ghi)perylene	6.6	ND
Benzyl Alcohol	13	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. 1000000000  
 Job No. AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880199  
 Sample No.: UF1 B-4 SS 3, 3.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1545  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	13	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	6.6	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	6.6	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	33	ND
3-Nitroaniline	33	ND
4-Nitroaniline	33	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988  
DATE REISSUED: March 10, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880199  
Sample No. UF1 B-4 SS 3, 8.5'  
Date Sampled: 1-26-88  
Time Sampled: 1545  
Date Extracted: 2-1-88  
Date Analyzed: 2-12-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	3	ND
Aldrin	2	ND
Heptachlor epoxide	2	ND
Endosulfan I	--*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	40	ND
Methoxychlor	--*	ND
Toxaphene	40	ND
Aroclor-1016	40	ND
Aroclor-1221	40	ND
Aroclor-1232	40	ND
Aroclor-1242	40	ND
Aroclor-1248	40	ND
Aroclor-1254	40	ND
Aroclor-1260	40	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988  
 DATE REISSUED: March 10, 1988

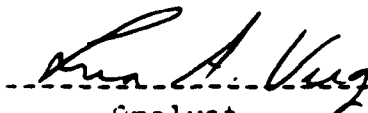
P.O. No.:  
 Job No.: AT077

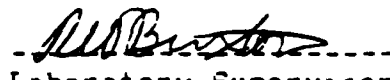
FOR: ES: Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880199  
 Sample No.: UF1 B-4 SS 3, 8.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1545  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-12-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
2-Chlorophenol	6.6	ND	
2-Nitrophenol	6.6	ND	
Phenol	6.6	ND	
2,4-Dimethylphenol	6.6	ND	
2,4-Dichlorophenol	6.6	ND	
2,4,6-Trichlorophenol	6.6	ND	
4-Chloro-3-methylphenol	13	ND	
2,4-Dinitrophenol	33	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	33	ND	
Pentachlorophenol	33	ND	
4-Nitrophenol	33	ND	
Benzoic Acid	33	ND	
2-Methylphenol	6.6	ND	
3- & 4-Methylphenol	6.6	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	6.6	ND	

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



CASE NARRATIVE

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880209  
 Sample No.: VF1 B-5 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1030  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880209  
 Sample No.: UF1 B-5 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1030  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS	
	Limit mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880209  
 Sample No.: UF1 B-5 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1030  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 9270  
Matrix: Soil

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No. :  
Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880209  
Sample No.: UF1 B-5 SS1 0'  
Date Sampled: 1-27-88  
Time Sampled: 1030  
Date Extracted: 2-2-88  
Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880209  
 Sample No.: UF1 B-5 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1030  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
			mg/kg
2-Chlorophenol	0.66		ND
2-Nitrophenol	0.66		ND
Phenol	0.66		ND
2,4-Dimethylphenol	0.66		ND
2,4-Dichlorophenol	0.66		ND
2,4,6-Trichlorophenol	0.66		ND
4-Chloro-3-methylphenol	1.3		ND
2,4-Dinitrophenol	3.3		ND
2,6-Dichlorophenol	--*		ND
2-Methyl-4,6-Dinitrophenol	3.3		ND
Pentachlorophenol	3.3		ND
4-Nitrophenol	3.3		ND
Benzoic Acid	3.3		ND
2-Methylphenol	0.66		ND
3- & 4-Methylphenol	0.66		ND
2,3,4,6-Tetrachlorophenol	--*		ND
2,4,5-Trichlorophenol	0.66		ND

*Lisa A. Vega*  
 Analyst

*MWBurton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880210  
 Sample No.: UF1 B-5 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1130  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

page 2 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880210  
Sample No.: UF1 B-5 SS2 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1130  
Date Extracted: 2-2-88  
Date Analyzed: 2-23-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No. ....  
 Job No. AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380210  
 Sample No.: UF1 B-5 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1130  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880210  
Sample No.: QF1 B-5 SS2 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1130  
Date Extracted: 2-2-88  
Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

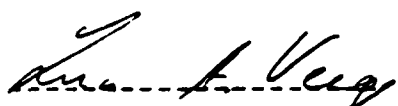
P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880210  
 Sample No.: UF1 B-5 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1130  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No. :  
 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880211  
 Sample No.: UF1 B5 SS3 10'  
 Date Sampled: 1-27-88  
 Time Sampled: 1205  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No. AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380211  
 Sample No.: UF1 B5 SS3 10'  
 Date Sampled: 1-27-88  
 Time Sampled: 1205  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380211  
 Sample No.: UF1 B5 SS3 10'  
 Date Sampled: 1-27-88  
 Time Sampled: 1205  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880211  
Sample No.: UF1 B5 SS3 10'  
Date Sampled: 1-27-88  
Time Sampled: 1205  
Date Extracted: 2-2-88  
Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

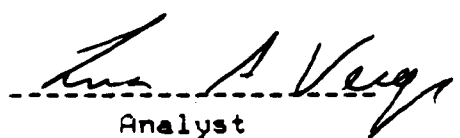
P.O. No.: .....  
 Job No.: AT077

FOR: ES Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980211  
 Sample No.: UF1 B5 SS3 10'  
 Date Sampled: 1-27-88  
 Time Sampled: 1205  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	mg/kg
	mg/kg	
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 3270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta-Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880212  
 Sample No.: UF1 B6 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1240  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No. ....  
 Job No. AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380212  
 Sample No.: UF1 B6 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1240  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS
		mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880212  
 Sample No.: UF1 B6 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1240  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
α,α-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880212  
Sample No.: UF1 B6 SS1 0'  
Date Sampled: 1-27-88  
Time Sampled: 1240  
Date Extracted: 2-2-88  
Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

page 5 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

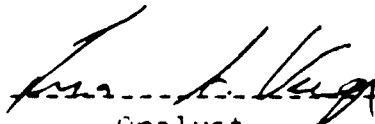
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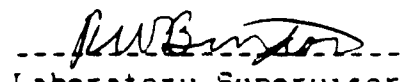
FOR: ES:Atlanta/Folk Field ANGB  
Address 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880212  
Sample No.: UF1 B6 SS1 01  
Date Sampled: 1-27-88  
Time Sampled: 1240  
Date Extracted: 2-2-88  
Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880205  
 Sample No.: UF1 B6 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1310  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	6.6	ND
1,4-Dichlorobenzene	6.6	ND
Hexachloroethane	6.6	ND
Bis(2-chloroethyl)ether	6.6	ND
1,2-Dichlorobenzene	6.6	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)ether	6.6	ND
N-Nitrosodi-n-propyl amine	6.6	ND
Hexachlorobutadiene	6.6	ND
1,2,4-Trichlorobenzene	6.6	ND
Nitrobenzene	6.6	ND
Isophorone	6.6	ND
Naphthalene	6.6	ND
Bis(2-chloroethoxy)methane	6.6	ND
2-Chloronaphthalene	6.6	ND
Hexachlorocyclopentadiene	6.6	ND
Acenaphthylene	6.6	ND
Acenaphthene	6.6	ND
Dimethyl phthalate	6.6	ND
2,6-Dinitrotoluene	6.6	ND
Fluorene	6.6	ND
2,4-Dinitrotoluene	6.6	ND
Diethyl phthalate	6.6	ND
N-Nitrosodiphenylamine	6.6	ND
Hexachlorobenzene	6.6	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880205  
 Sample No.: UF1 B6 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1310  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	6.6	ND
Anthracene	6.6	ND
Dibutyl phthalate	6.6	ND
Fluoranthene	6.6	ND
4-Chlorophenyl phenyl ether	6.6	ND
Pyrene	6.6	ND
Butyl Benzyl phthalate	6.6	ND
Bis(2-ethylhexyl) phthalate	6.6	ND
Chrysene	6.6	ND
4-Bromophenyl phenyl ether	6.6	ND
Benzo(a)anthracene	6.6	ND
Di-n-octylphthalate	6.6	ND
Benzo(b)fluoranthene	6.6	ND
Benzo(k)fluoranthene	6.6	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	13	ND
Benzo(a)pyrene	6.6	ND
Indeno(1,2,3-cd)pyrene	6.6	ND
Dibenzo(a,h)anthracene	6.6	ND
Benzo(ghi)perylene	6.6	ND
Benzyl Alcohol	13	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880205  
 Sample No.: UF1 B6 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1310  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	13	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	6.6	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	6.6	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	33	ND
3-Nitroaniline	33	ND
4-Nitroaniline	33	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980205  
Sample No.: UF1 B6 3S2 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1310  
Date Extracted: 2-2-88  
Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	3	ND
Aldrin	2	ND
Heptachlor epoxide	2	ND
Endosulfan I	--*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	40	ND
Methoxychlor	--*	ND
Toxaphene	40	ND
Aroclor-1016	40	ND
Aroclor-1221	40	ND
Aroclor-1232	40	ND
Aroclor-1242	40	ND
Aroclor-1248	40	ND
Aroclor-1254	40	ND
Aroclor-1260	40	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

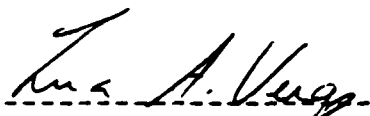
P.O. No.: .....  
 Job No.: AT077


FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880205  
 Sample No.: UF1 B6 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1310  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-23-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	6.6	ND
2-Nitrophenol	6.6	ND
Phenol	6.6	ND
2,4-Dimethylphenol	6.6	ND
2,4-Dichlorophenol	6.6	ND
2,4,6-Trichlorophenol	6.6	ND
4-Chloro-3-methylphenol	13	ND
2,4-Dinitrophenol	33	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	33	ND
Pentachlorophenol	33	ND
4-Nitrophenol	33	ND
Benzoic Acid	33	ND
2-Methylphenol	6.6	ND
3- & 4-Methylphenol	6.6	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	6.6	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980206  
 Sample No.: UF1 B6 SS3 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1335  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	2.7
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880206  
 Sample No.: UF1 B6 SS3 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1335  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880206  
 Sample No.: UF1 B6 003 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1335  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	Analytical Results
	Limits mg/kg	mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	2.7
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
4-Nitroso-di-n-butylamine	---*	ND
4-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880206  
Sample No.: UF1 B6 SS3 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1335  
Date Extracted: 2-2-88  
Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

page 3 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

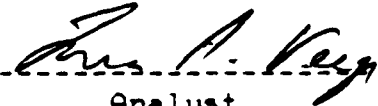
P.O. No.: .....  
Job No.: AT077


FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880206  
Sample No.: UF1 B6 SS3 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1335  
Date Extracted: 2-2-88  
Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880207  
 Sample No.: UF1 B7 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1500  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880207  
 Sample No.: UF1 B7 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1500  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880207  
 Sample No.: UF1 B7 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1500  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980207  
Sample No.: UF1 B7 SS1 0'  
Date Sampled: 1-27-88  
Time Sampled: 1500  
Date Extracted: 2-2-88  
Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

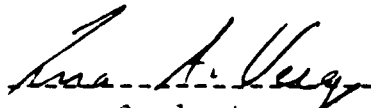
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 Job No.: AT077

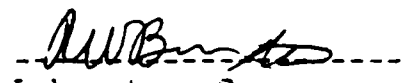
FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880207  
 Sample No.: UF1 B7 SS1 0'  
 Date Sampled: 1-27-88  
 Time Sampled: 1500  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880208  
 Sample No.: UF1 B7 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1530  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880208  
 Sample No.: VF1 B7 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1530  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 26, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880208  
 Sample No.: UF1 B7 SS2 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1530  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-22-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

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Date Received: January 28, 1988  
Date Reported: February 28, 1988

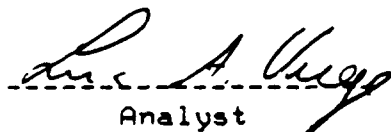
P.O. No.: .....  
Job No.: AT077

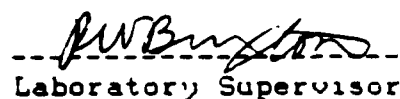
FOR: ES:Atlanta/Jolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880208  
Sample No.: UF1 B7 SS2 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1530  
Date Extracted: 2-2-88  
Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880208  
Sample No.: UF1 B7 SS2 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1530  
Date Extracted: 2-2-88  
Date Analyzed: 2-22-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

page 2 of 5

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880204  
Sample No.: UF1 B7 SS3 3.5'  
Date Sampled: 1-27-88  
Time Sampled: 1600  
Date Extracted: 2-2-88  
Date Analyzed: 2-19-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880204  
 Sample No.: VF1 B7 SS3 @.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1600  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-19-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits	mg/kg	
	mg/kg		
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 3270  
 Matrix: Soil  
 (continued)

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880204  
 Sample No.: UF1 B7 SS3 9.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1600  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-19-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: January 28, 1988  
Date Reported: February 28, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880204  
Sample No.: UF1 B7 SS3 8.5'  
Date Sampled: 1-27-88  
Time Sampled: 1600  
Date Extracted: 2-2-88  
Date Analyzed: 2-19-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 28, 1988  
 Date Reported: February 28, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880204  
 Sample No.: UF1 B7 SS3 3.5'  
 Date Sampled: 1-27-88  
 Time Sampled: 1600  
 Date Extracted: 2-2-88  
 Date Analyzed: 2-19-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Tracy A. Vandy*  
 Analyst

*W. B. ...*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880217  
 Sample No.: UF1, B8, SS1, 0'  
 Date Sampled: 1-28-88  
 Time Sampled: 1045  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Sophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
1-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
1,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
1,4-Dinitrotoluene	0.66	ND
Methyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 890217  
 Sample No.: QF1, B8, SS1, 0'  
 Date Sampled: 1-29-88  
 Time Sampled: 1045  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
D1-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
2,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzy Alcohol	1.3	ND	



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. ....  
 Job No. AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr Jim Duncan

Lab Number: 880217  
 Sample No.: UF1, B8, SS1, 0'  
 Date Sampled: 1-28-88  
 Time Sampled: 1045  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
α,α-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 29, 1988  
Date Reported: March 4, 1988  
DATE REISSUED: March 10, 1988

P.O. No. ....  
Job No. AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880217  
Sample No.: UF1, B8, SS1, 0'  
Date Sampled: 1-28-88  
Time Sampled: 1045  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
			mg/kg
Alpha-BHC	--*		ND
Gamma-BHC	---		ND
Beta-BHC	0.4		ND
Heptachlor	0.2		ND
Delta-BHC	0.3		ND
Aldrin	0.2		ND
Heptachlor epoxide	0.2		ND
Endosulfan I	--*		ND
Dieldrin	0.3		ND
4,4'-DDE	0.6		ND
Endrin	--*		ND
Endosulfan II	--*		ND
4,4'-DDD	0.3		ND
4,4'-DDT	0.5		ND
Endosulfan Sulfate	0.6		ND
Endrin aldehyde	--*		ND
Endrin Ketone	--*		ND
Chlordane	4.0		ND
Methoxychlor	--*		ND
Toxaphene	4.0		ND
Aroclor-1016	4.0		ND
Aroclor-1221	4.0		ND
Aroclor-1232	4.0		ND
Aroclor-1242	4.0		ND
Aroclor-1248	4.0		ND
Aroclor-1254	4.0		ND
Aroclor-1260	4.0		ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

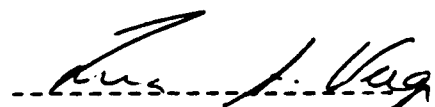
P.O. No. ....  
 Job No. AT077

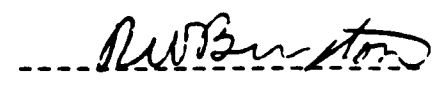
FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880217  
 Sample No.: UF1, B8, SS1, 0'  
 Date Sampled: 1-28-88  
 Time Sampled: 1045  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits	mg/kg	
	mg/kg		
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880218  
 Sample No.: UF1, B8, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1125  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No. ....  
 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880218  
 Sample No.: UF1, B8, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1125  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880218  
 Sample No.: UF1, B8, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1125  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 29, 1988  
Date Reported: March 4, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880218  
Sample No.: UF1, B8, SS2, 3.5'  
Date Sampled: 1-28-88  
Time Sampled: 1125  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	—*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880218  
 Sample No.: UF1, B8, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1125  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

*[Signature]*  
 Analyst

*[Signature]*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 29, 1988

P.O. No. ....

Date Reported: March 4, 1988

Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880219  
 Sample No.: UF1 B8 SS3 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1145  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits	mg/kg	
	mg/kg		
1,3-Dichlorobenzene	0.66		ND
1,4-Dichlorobenzene	0.66		ND
Hexachloroethane	0.66		ND
Bis(2-chloroethyl)ether	0.66		ND
1,2-Dichlorobenzene	0.66		ND
N-Nitrosodimethylamine	2.5		ND
Bis(2-chloroisopropyl)ether	0.66		ND
N-Nitrosodi-n-propyl amine	0.66		ND
Hexachlorobutadiene	0.66		ND
1,2,4-Trichlorobenzene	0.66		ND
Nitrobenzene	0.66		ND
Isophorone	0.66		ND
Naphthalene	0.66		ND
Bis(2-chloroethoxy)methane	0.66		ND
2-Chloronaphthalene	0.66		ND
Hexachlorocyclopentadiene	0.66		ND
Acenaphthylene	0.66		ND
Acenaphthene	0.66		ND
Dimethyl phthalate	0.66		ND
2,6-Dinitrotoluene	0.66		ND
Fluorene	0.66		ND
2,4-Dinitrotoluene	0.66		ND
Diethyl phthalate	0.66		ND
N-Nitrosodiphenylamine	0.66		ND
Hexachlorobenzene	0.66		ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880219  
 Sample No.: UF1 B8 SS3 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1145  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880219  
 Sample No.: UF1 B8 SS3 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1145  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 29, 1988  
Date Reported: March 4, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880219  
Sample No.: UF1 B8 SS3 8.5'  
Date Sampled: 1-28-88  
Time Sampled: 1145  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

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Date Received: January 29, 1988  
 Date Reported: March 4, 1988

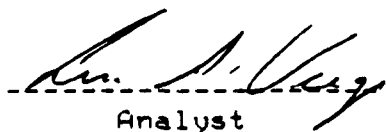
P.O. No.: .....  
 Job No.: AT077

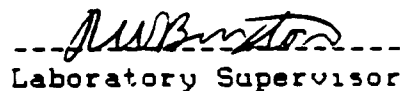
FOR: ES:Atlanta/Uolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880219  
 Sample No.: QF1 B8 SS3 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1145  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. ....  
 Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880220  
 Sample No.: OF1, B9, SS1, 0'  
 Date Sampled: 1-29-88  
 Time Sampled: 1320  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 3

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880220  
 Sample No.: UF1, B9, SS1, 0'  
 Date Sampled: 1-28-88  
 Time Sampled: 1320  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No.:  
 Job No. AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880220  
 Sample No.: UF1, B9, SS1, 0'  
 Date Sampled: 1-28-88  
 Time Sampled: 1320  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: January 29, 1988  
Date Reported: March 4, 1988  
DATE REISSUED: March 10, 1988

P.O. No. 1111111111  
Job No. : AT077

FOR: ES Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380220  
Sample No.: DF1, B9, SS1, 0'  
Date Sampled: 1-29-88  
Time Sampled: 1320  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

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Date Received: January 29, 1988  
Date Reported: March 4, 1988  
DATE REISSUED: March 10, 1988

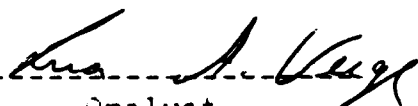
P.O. No. ....  
Job No. AT077

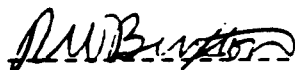
FOR: ES Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 890220  
Sample No.: UF1, B9, SS1, 0'  
Date Sampled: 1-28-88  
Time Sampled: 1320  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880215  
 Sample No.: UF1, B9, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1350  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits	mg/kg	
	mg/kg		
1,3-Dichlorobenzene	0.66		ND
1,4-Dichlorobenzene	0.66		ND
Hexachloroethane	0.66		ND
Bis(2-chloroethyl)ether	0.66		ND
1,2-Dichlorobenzene	0.66		ND
N-Nitrosodimethylamine	2.5		ND
Bis(2-chloroisopropyl)ether	0.66		ND
N-Nitrosodi-n-propyl amine	0.66		ND
Hexachlorobutadiene	0.66		ND
1,2,4-Trichlorobenzene	0.66		ND
Nitrobenzene	0.66		ND
Isophorone	0.66		ND
Naphthalene	0.66		ND
Bis(2-chloroethoxy)methane	0.66		ND
2-Chloronaphthalene	0.66		ND
Hexachlorocyclopentadiene	0.66		ND
Acenaphthylene	0.66		ND
Acenaphthene	0.66		ND
Dimethyl phthalate	0.66		ND
2,6-Dinitrotoluene	0.66		ND
Fluorene	0.66		ND
2,4-Dinitrotoluene	0.66		ND
Diethyl phthalate	0.66		ND
N-Nitrosodiphenylamine	0.66		ND
Hexachlorobenzene	0.66		ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880215  
 Sample No.: UF1, B9, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1350  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 3270  
 Matrix: Soil  
 (continued)

Date Received: January 29, 1988

Date Reported: March 4, 1988

P.O. No.: .....

Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880215  
 Sample No.: UF1, B9, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1350  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 3270  
Matrix: Soil

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Date Received: January 29, 1988  
Date Reported: March 4, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880215  
Sample No.: UF1, B9, SS2, 3.5'  
Date Sampled: 1-28-88  
Time Sampled: 1350  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

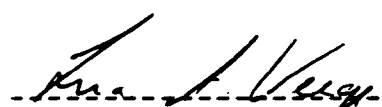
P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980215  
 Sample No.: UF1, B9, SS2, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1350  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 3270  
 Matrix: Soil

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. ....  
 Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980216  
 Sample No.: UF1, B9, SS3, 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1415  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	1.0
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 Date REISSUED: March 10, 1988

P.O. No. :  
 Job No. : AT077

Origin: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880216  
 Sample No.: UF1, B9, SS3, 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1415  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Benanthrene	0.66	ND	
Anthracene	0.66	ND	
Diethyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
1-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Diethyl Benzyl phthalate	0.66	ND	
Diis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
1-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzenzidine	6.0	ND	
2,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
1-benzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
1-methyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix Soil  
 (continued)

Page 3 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. 100-1000000000  
 Job No. AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880216  
 Sample No.: UF1, B9, SS3, 8.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1415  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: January 29, 1988  
Date Reported: March 4, 1988  
DATE REISSUED: March 10, 1988

P.O. No. ....  
Job No. AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880216  
Sample No.: UF1, B9, SS3, 8.5'  
Date Sampled: 1-28-88  
Time Sampled: 1415  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits	mg/kg	
	mg/kg		
Alpha-BHC	--*	ND	
Gamma-BHC	—*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Prochlor-1016	4.0	ND	
Prochlor-1221	4.0	ND	
Prochlor-1232	4.0	ND	
Prochlor-1242	4.0	ND	
Prochlor-1248	4.0	ND	
Prochlor-1254	4.0	ND	
Prochlor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

page 5 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988  
 DATE REISSUED: March 10, 1988

P.O. No. 11111111111111111111  
 Job No. AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880216  
 Sample No: OF1, B9, SS3, 3.5'  
 Date Sampled: 1-28-88  
 Time Sampled: 1415  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Lisa A. Kery*  
 Analyst

*DWBurton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880289  
 Sample No.: UF1 B-10 SS1, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1015  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-8-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 5

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880289  
 Sample No.: UF1 B-10 SS1, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1015  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No. ....  
 Job No. : AT077

For: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380289  
 Sample No.: UF1 B-10 SS1, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1015  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-8-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 9270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880289  
Sample No.: UF1 B-10 SS1, 0.5'  
Date Sampled: 2-9-88  
Time Sampled: 1015  
Date Extracted: 2-17-88  
Date Analyzed: 3-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

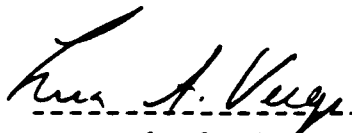
P.O. No.: .....  
Job No.: AT077


FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880289  
Sample No.: UF1 B-10 SS1, 0.5'  
Date Sampled: 2-9-88  
Time Sampled: 1015  
Date Extracted: 2-17-88  
Date Analyzed: 3-8-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

  
-----  
Analyst

  
-----  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880290  
 Sample No.: UF1 B-27 SS1, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1015  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-8-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS  mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880290  
 Sample No.: UF1 B-27 SS1, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1015  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-8-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880290  
 Sample No.: QF1 B-27 SS1, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1015  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-8-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880290  
Sample No.: UF1 B-27 SS1, 0.5'  
Date Sampled: 2-9-88  
Time Sampled: 1015  
Date Extracted: 2-17-88  
Date Analyzed: 3-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Diieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 9270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880290  
Sample No.: UF1 B-27 SS1, 0.5'  
Date Sampled: 2-9-88  
Time Sampled: 1015  
Date Extracted: 2-17-88  
Date Analyzed: 3-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Luc A. Vug*  
Analyst

*RWB*  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880291  
 Sample No.: UF1 B-10 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1045  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880291  
 Sample No.: UF1 B-10 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1045  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880291  
 Sample No.: VF1 B-10 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1045  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection	Analytical Results
	Limits mg/kg	mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880291  
Sample No.: QF1 B-10 SS2, 3.5'  
Date Sampled: 2-9-88  
Time Sampled: 1045  
Date Extracted: 2-17-88  
Date Analyzed: 3-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880291  
 Sample No.: UF1 B-10 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1045  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

*Eric A. Vega*  
 Analyst

*M. B. Burton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980292  
 Sample No.: UF1 B-10 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1125  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880292  
 Sample No.: UF1 B-10 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1125  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880292  
 Sample No.: UF1 B-10 SS3, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1125  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 9270  
Matrix: Soil

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Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FDR: ES Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880292  
Sample No.: UF1 B-10 SS3, 8.5'  
Date Sampled: 2-9-88  
Time Sampled: 1125  
Date Extracted: 2-17-88  
Date Analyzed: 3-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	___*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

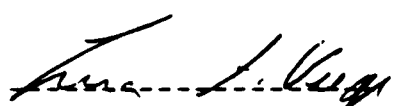
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 Job No.: AT077

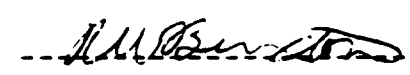
FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880292  
 Sample No.: UF1 B-10 SS3, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1125  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-9-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880293  
 Sample No.: UF1 B-11 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1300  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No. ....  
 Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880293  
 Sample No.: UF1 B-11 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1300  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880293  
 Sample No.: QF1 B-11 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1300  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 9270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980293  
Sample No.: VF1 B-11 SS1, 1.0'  
Date Sampled: 2-9-88  
Time Sampled: 1300  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 9270  
 Matrix: Soil

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Date Received: February 10, 1988  
 Date Reported: March 15, 1988

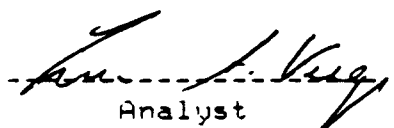
P.O. No. ....  
 Job No. AT077

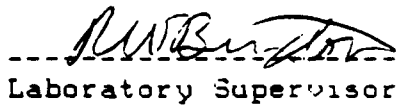
FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 890293  
 Sample No.: QF1 B-11 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1300  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
Priority Pollutant Analysis  
Base Neutrals - SW 9270  
Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980294  
Sample No.: UF1 B-11 SS2, 3.5'  
Date Sampled: 2-9-88  
Time Sampled: 1320  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880294  
 Sample No.: UF1 B-11 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1320  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS	
	Limit mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES Atlanta/Oblk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880294  
 Sample No.: QF1 B-11 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1320  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880294  
Sample No.: UF1 B-11 SS2, 3.5'  
Date Sampled: 2-9-88  
Time Sampled: 1320  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

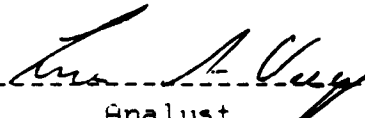
P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880294  
 Sample No.: UF1 B-11 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1320  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880295  
 Sample No.: UF1 B-11 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1340  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	1.8
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880295  
 Sample No.: UF1 B-11 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1340  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880295  
 Sample No.: UF1 B-11 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1340  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	2.4
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880295  
Sample No.: UF1 B-11 SS3, 8.5'  
Date Sampled: 2-9-88  
Time Sampled: 1340  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

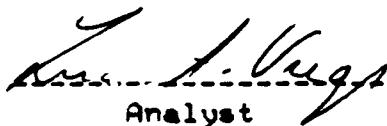
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 Job No.: AT077

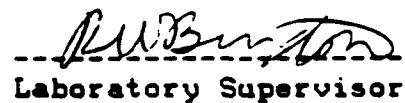
FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880295  
 Sample No.: UF1 B-11 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1340  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880296  
 Sample No.: UF1 B-12 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1400  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

page 2 of 3

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880296  
 Sample No.: UF1 B-12 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1400  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880296  
 Sample No.: VF1 B-12 SS1, 1.0'  
 Date Sampled: 2-9-88  
 Time Sampled: 1400  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 9270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880296  
Sample No.: UF1 B-12 SS1, 1.0'  
Date Sampled: 2-9-88  
Time Sampled: 1400  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

page 5 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

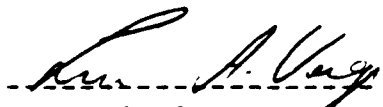
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Job No.: AT077

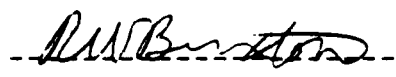
FOR: ES: Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880296  
Sample No.: UF1 B-12 SS1, 1.0'  
Date Sampled: 2-9-88  
Time Sampled: 1400  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880297  
 Sample No.: UF1 B-12 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1500  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES-Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980297  
 Sample No.: QF1 B-12 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1500  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Uolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980297  
 Sample No.: UF1 B-12 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1500  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880297  
Sample No.: UF1 B-12 SS2, 3.5'  
Date Sampled: 2-9-88  
Time Sampled: 1500  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

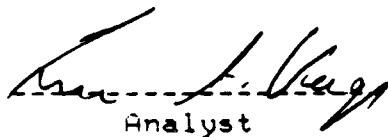
P.O. No.: .....  
 Job No.: AT077

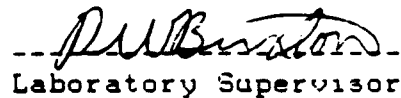
FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880297  
 Sample No.: UF1 B-12 SS2, 3.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1500  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
			mg/kg
2-Chlorophenol	0.66		ND
2-Nitrophenol	0.66		ND
Phenol	0.66		ND
2,4-Dimethylphenol	0.66		ND
2,4-Dichlorophenol	0.66		ND
2,4,6-Trichlorophenol	0.66		ND
4-Chloro-3-methylphenol	1.3		ND
2,4-Dinitrophenol	3.3		ND
2,6-Dichlorophenol	--*		ND
2-Methyl-4,6-Dinitrophenol	3.3		ND
Pentachlorophenol	3.3		ND
4-Nitrophenol	3.3		ND
Benzoic Acid	3.3		ND
2-Methylphenol	0.66		ND
3- & 4-Methylphenol	0.66		ND
2,3,4,6-Tetrachlorophenol	--*		ND
2,4,5-Trichlorophenol	0.66		ND

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880298  
 Sample No.: UF1 B-12 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1540  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880298  
 Sample No.: QF1 B-12 SS3, 8.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1540  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880298  
 Sample No.: UF1 B-12 SS3, 0.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1540  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880298  
Sample No.: UF1 B-12 SS3, 8.5'  
Date Sampled: 2-9-88  
Time Sampled: 1540  
Date Extracted: 2-17-88  
Date Analyzed: 3-10-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 3270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880298  
 Sample No.: UF1 B-12 SS3, 9.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1540  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-10-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
		mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Tom A. Veg*  
 Analyst

*R. W. Benton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880299  
Sample No.: VF1 B-13 SS1, 1.5'  
Date Sampled: 2-9-88  
Time Sampled: 1600  
Date Extracted: 2-17-88  
Date Analyzed: 3-11-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	
	mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880299  
 Sample No.: UF1 B-13 SS1, 1.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1600  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-11-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS
		mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
D1-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880299  
 Sample No.: OF1 B-13 SS1, 1.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1600  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-11-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 3270  
Matrix: Soil

page 4 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No. ....  
Job No. : AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880299  
Sample No.: QF1 B-13 SS1, 1.5'  
Date Sampled: 2-9-88  
Time Sampled: 1600  
Date Extracted: 2-17-88  
Date Analyzed: 3-11-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No. ....  
 Job No. : AT077

FOR: ES: Atlanta/Oolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880299  
 Sample No.: UF1 B-13 SS1, 1.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1600  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-11-88

Compound	Detection Limits	ANALYTICAL RESULTS
	mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Sam A. Urey*  
 Analyst

*D.W. Burston*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880375  
 Sample No.: UF1 B-13 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1000  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : 9T077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880375  
 Sample No.: UF1 B-13 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1000  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880375  
 Sample No.: UF1 B-13 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1000  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

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Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880375  
Sample No.: UF1 B-13 SS2, 3.5'  
Date Sampled: 2-10-88  
Time Sampled: 1000  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	—*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880375  
 Sample No.: UF1 B-13 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1000  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Laura Kueh*  
 Analyst

*Al Burt*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrals - SW 8270**  
**Matrix: Soil**

page 1 of 5

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880376  
 Sample No.: UF1 B-13 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1015  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880376  
 Sample No.: UF1 B-13 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1015  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880376  
 Sample No.: UF1 B-13 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1015  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 9270  
Matrix: Soil

page 4 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880376  
Sample No.: UF1 B-13 SS3, 8.5'  
Date Sampled: 2-10-88  
Time Sampled: 1015  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880376  
 Sample No.: UF1 B-13 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1015  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Laura Kuek*  
 Analyst

*RWBenton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 5

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880377  
 Sample No.: UF1 B-14 SS1, 1.0'  
 Date Sampled: 2-10-88  
 Time Sampled: 1100  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

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Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880377  
Sample No.: UF1 B-14 SS1, 1.0'  
Date Sampled: 2-10-88  
Time Sampled: 1100  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880377  
 Sample No.: UF1 B-14 SS1, 1.0'  
 Date Sampled: 2-10-88  
 Time Sampled: 1100  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
α,α-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Job Number: 880377  
Sample No: UF1 B-14 SS1, 1.0'  
Date Sampled: 2-10-88  
Time Sampled: 1100  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Beta-BHC	--*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Procior-1016	4.0	ND	
Procior-1221	4.0	ND	
Procior-1232	4.0	ND	
Procior-1242	4.0	ND	
Procior-1248	4.0	ND	
Procior-1254	4.0	ND	
Procior-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880377  
 Sample No.: UF1 B-14 SS1, 1.0'  
 Date Sampled: 2-10-88  
 Time Sampled: 1100  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Anna Kirk*  
 -----  
 Analyst

*RWB*  
 -----  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
SAMPLE NO(S).: 88030531 & 88020377**

Surrogate recoveries for sample 88030531 included two from the acid fraction that were outside of CLP QC limits. Matrix spike analyses were performed on this sample. Surrogate recoveries for the matrix spike and MSD showed a similar pattern. According to CLP protocol, this is sufficient to show a matrix effect.

Acid surrogate spike recoveries for sample 88020377 were below CLP QC limits. There was insufficient sample remaining to re-extract the sample.

Environmental Science  
 Priority Pollution Management  
 Base Institute - SU 0271  
 Atlanta, Ga.

Page 1 of 2

Date Received February 11, 1966  
 Date Reported March 29, 1966

P. O. No.  
 Job No. 01174

FOR ES Atlanta/Date 02/11/66  
 Address 17 Executive Park S E Suite 104  
 Atlanta, Georgia 30329

01174 No. 104 (02/11/66)

Lab Number 001174  
 Sample No. 01: 01a 02b 03  
 Date Sampled 2-11-66  
 Time Sampled 1:30  
 Date Extracted 2-11-66  
 Date Analyzed 3-19-66

Compound	Detection Limits ng/kg	Amount, ng/kg
1,3-Dichlorobenzene	0.66	66
1,4-Dichlorobenzene	0.66	66
Hexachloroethane	0.66	66
Bis(2-chloroethyl) ether	0.66	66
1,2-Dichlorobenzene	0.66	66
N-Nitrosodimethylamine	2.5	66
Bis(2-chloroisopropyl) ether	0.66	66
N-Nitrosodi-n-propylamine	0.66	66
Hexachlorobutadiene	0.66	66
1,2,4-Trichlorobenzene	0.66	66
Nitrobenzene	0.66	66
Isophorone	0.66	66
Naphthalene	0.66	66
Bis(2-chloroethoxy)methane	0.66	66
2-Chloronaphthalene	0.66	66
Hexachlorocyclopentadiene	0.66	66
Acenaphthylene	0.66	66
Acenaphthene	0.66	66
Dimethyl phthalate	0.66	66
2,6-Dinitrotoluene	0.66	66
Fluorene	0.66	66
2,4-Dinitrotoluene	0.66	66
Diethyl phthalate	0.66	66
N-Nitrosodiphenylamine	0.66	66
Hexachlorobenzene	0.66	66

Priority Pollutant Analysis  
 Base Neutral - BU 0270  
 Matrix Soil  
 (continued)

page 2 of 5

Date Received February 11, 1988  
 Date Reported March 29, 1988

P O No  
 Job No AT077

Lab ES Atlanta/Orla AMES  
 Address 57 Executive Park S E, Suite 900  
 Atlanta, Georgia 30329

ATTN Mr Jim Duncan

Lab Number 000370  
 Sample No UFI 8-14 887, 3 5  
 Date Sampled 2-18-88  
 Time Sampled 1230  
 Date Extracted 2-21-88  
 Date Analyzed 3-19-88

Compound	Detection Limit ng/kg	ANALYTICAL RESULTS	
		ng/kg	
Phenanthrene	0.66	66	66
Anthracene	0.66	66	66
Dibutyl phthalate	0.66	66	66
Fluoranthene	0.66	66	66
4-Chlorophenyl phenyl ether	0.66	66	66
Pyrene	0.66	66	66
Butyl Benzyl phthalate	0.66	66	66
Bis(2-ethylhexyl) phthalate	0.66	66	66
Chrysene	0.66	66	66
4-Bromophenyl phenyl ether	0.66	66	66
Benz(a)anthracene	0.66	66	66
Di-n-octylphthalate	0.66	66	66
Benz(b)fluoranthene	0.66	66	66
Benz(k)fluoranthene	0.66	66	66
Benzidine	6.0	66	66
3,3'-Dichlorobenzidine	1.3	66	66
Benz(a)pyrene	0.66	66	66
Indeno(1,2,3-cd)pyrene	0.66	66	66
Dibenz(a,h)anthracene	0.66	66	66
Benz(ghi)perylene	0.66	66	66
Benzyl Alcohol	1.3	66	66

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880378  
 Sample No.: VF1 B-14 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1230  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
α,α-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

From: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Sample Number: 880378  
Sample No.: UF1 B-14 SS2, 3.5'  
Date Sampled: 2-10-88  
Time Sampled: 1230  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	mg/kg	mg/kg	
para-BHC	--*	ND	
meta-BHC	---	ND	
ortho-BHC	0.4	ND	
o,p'-DDE	0.2	ND	
ortho-BHC	0.3	ND	
Endrin	0.2	ND	
o,p'-DDE epoxide	0.2	ND	
Endosulfan I	--*	ND	
Endrin	0.3	ND	
4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4'-DDD	0.3	ND	
4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Endosulfan	4.0	ND	
Endosulfan	--*	ND	
Endosulfan	4.0	ND	
Endosulfan-1016	4.0	ND	
Endosulfan-1221	4.0	ND	
Endosulfan-1232	4.0	ND	
Endosulfan-1242	4.0	ND	
Endosulfan-1248	4.0	ND	
Endosulfan-1254	4.0	ND	
Endosulfan-1260	4.0	ND	

EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analyte  
 Acid Extractables -- SM 8270  
 Matrix Soil

page 2 of 2

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P O no  
 Job no 87877  
 ATTN no Joe Jackson

FOR: ES:Atlanta/Ork ANGB  
 Address: 57 Executive Park S E, Suite 190  
 Atlanta, Georgia 30329

Lab Number: 880370  
 Sample No.: V91 B-14 582. 3 9  
 Date Sampled: 2-18-88  
 Time Sampled: 1230  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-19-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
2-Chlorophenol	0.66	66
2-Nitrophenol	0.66	66
Phenol	0.66	66
2,4-Dimethylphenol	0.66	66
2,4-Dichlorophenol	0.66	66
2,4,6-Trichlorophenol	0.66	66
4-Chloro-3-methylphenol	1.3	66
2,4-Dinitrophenol	3.3	66
2,6-Dichlorophenol	--*	66
2-Methyl-4,6-Dinitrophenol	3.3	66
Pentachlorophenol	3.3	66
4-Nitrophenol	3.3	66
Benzoic Acid	3.3	66
2-Methylphenol	0.66	66
3- & 4-Methylphenol	0.66	66
2,3,4,6-Tetrachlorophenol	--*	66
2,4,5-Trichlorophenol	0.66	66

.....  
*Sanna Kueh*  
 Analyst

.....  
*Bill Barston*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense



ENGINEERING SCIENCES  
Priority Pollutant Analysis  
Base Neutral - SW 8278  
Matrix Soil

Page . . . 1

Received February 11, 1988  
Reported March 25, 1988

Job No. 47177

25 Atlanta/Dele **MSD**  
17 Executive Park S.E. Suite 198  
Atlanta, Georgia 30329

Job Name Job Number

Number 000371  
Sample No. SW 8-18 243 0 1  
Date Sampled 2-19-88  
Time Sampled 1:30  
Date Extracted 2-21-88  
Date Analyzed 3-16-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
		mg/kg
1,2-Dichlorobenzene	0.66	0.00
1,4-Dichlorobenzene	0.66	0.00
1,1,2-Trichloroethane	0.66	0.00
1,1,1-Trichloroethane	0.66	0.00
1,2-Dichloroethane	0.66	0.00
Nitrodimethylamine	2.5	0.00
1,2-Dichloropropane	0.66	0.00
1,1,1-Trichloroethane	0.66	0.00
1,2,4-Trichlorobenzene	0.66	0.00
Benzene	0.66	0.00
Chlorobenzene	0.66	0.00
Phthalene	0.66	0.00
1,2-Dichloroethane	0.66	0.00
Chloronaphthalene	0.66	0.00
1,2,4-Trichlorobenzene	0.66	0.00
1-Naphthylamine	0.66	0.00
1-Naphthol	0.66	0.00
Methyl phthalate	0.66	0.00
2,4-Dinitrotoluene	0.66	0.00
Toluene	0.66	0.00
4-Dinitrotoluene	0.66	0.00
Ethyl phthalate	0.66	0.00
Nitrodimethylamine	0.66	0.00
1,2-Dichlorobenzene	0.66	0.00

Priority Pollutant Analysis  
 Base Neutrals - SU 8270  
 Matrix Soil  
 (continued)

page 2 of 5

Date Received February 11, 1988  
 Date Reported March 25, 1988

P O No  
 Job No. AT077

OR: ES Atlanta/Volk AMSB  
 Address 57 Executive Park S E, Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880371  
 Sample No: UF1 B-14 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1330  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-14-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Dibutylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

Address: ES:Atlanta/Volk ANGB  
 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Sample Number: 880371  
 Sample No.: UF1 B-14 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Volume Sampled: 1330  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-14-88

Compound	Detection Limits	Analytical Results
	mg/kg	mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
Aminobiphenyl	--*	ND
Chloroaniline	1.3	ND
Chloronaphthalene	--*	ND
benzofuran	0.66	ND
Dimethylaminoazobenzene	--*	ND
12-Dimethylbenz(a)anthracene	--*	ND
,a-Dimethylphenethylamine	--*	ND
phenylamine	--*	ND
2-Diphenylhydrazine	--*	ND
thyl methanesulfonate	--*	ND
Methylcholanthrene	--*	ND
thyl methanesulfonate	--*	ND
Methylcholanthrene	--*	ND
Methylnaphthalene	0.66	ND
Naphthylamine	--*	ND
Naphthylamine	--*	ND
Nitroaniline	3.3	ND
Nitroaniline	3.3	ND
Nitroaniline	3.3	ND
Nitroso-di-n-butylamine	--*	ND
Nitrosopiperidine	--*	ND
ntachlorobenzene	--*	ND
ntachloronitrobenzene	--*	ND
enacetin	--*	ND
Picoline	--*	ND
onamide	--*	ND
2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880371  
Sample No.: UF1 B-14 SS3, 8.5'  
Date Sampled: 2-10-88  
Time Sampled: 1330  
Date Extracted: 2-21-88  
Date Analyzed: 3-14-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	---	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Proclor-1016	4.0	ND	
Proclor-1221	4.0	ND	
Proclor-1232	4.0	ND	
Proclor-1242	4.0	ND	
Proclor-1248	4.0	ND	
Proclor-1254	4.0	ND	
Proclor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Date Received February 11, 1980  
 Date Reported March 29, 1980

P.O. No.  
 Job No.

FOR: ES Atlanta/Date 4403  
 Address 57 Executive Park S.E., Suite 101  
 Atlanta, Georgia 30339

ATTA No. Job Number

Lab Number 00337  
 Sample No. 19: 0-10 362 0 1  
 Date Sampled 2-19-80  
 Time Sampled 1230  
 Date Extracted 2-21-80  
 Date Analyzed 2-10-80

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Laura Kuck*  
 Analyst

*RWBurt*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Environmental Sciences  
 Federal Pollution Agency  
 Research Triangle Park, N.C.  
 Method 8000

Date Received February 11, 1968  
 Date Reported March 19, 1968  
 POC ES Atlanta (404) 525-1111  
 Address 17 Executive Park S.E. Suite 101  
 Atlanta, Georgia 30339

Lab Number 001075  
 Sample No. 101-010-001-1-1  
 Date Sampled 2-11-68  
 Time Sampled 1:30  
 Date Extracted 2-11-68  
 Date Analyzed 2-19-68

Compound	Detection Level	mg/kg
1,3-Dichlorobenzene	1	66
1,4-Dichlorobenzene	1	66
Hexachloroethane	1	66
Bis(2-chloroethyl) ether	0	66
1,2-Dichlorobenzene	0	66
N-Nitrosodimethylamine	2	5
Bis(2-chloroisopropyl) ether	0	66
N-Nitrosodi-n-propyl amine	0	66
Hexachlorobutadiene	0	66
1,2,4-Trichlorobenzene	0	66
Nitrobenzene	0	66
Isophorone	0	66
Naphthalene	0	66
Bis(2-chloroethoxy)methane	0	66
2-Chloronaphthalene	0	66
Hexachlorocyclopentadiene	0	66
Acenaphthylene	0	66
Acenaphthene	0	66
Dimethyl phthalate	0	66
2,6-Dinitrotoluene	0	66
Fluorene	0	66
2,4-Dinitrotoluene	0	66
Diethyl phthalate	0	66
N-Nitrosodiphenylamine	0	66
Hexachlorobenzene	0	66

Priority Pollutant Analysis  
 Base Neutrals - SW 0270  
 Matrix: Soil  
 (continued)

page 2 of 5

Date Received February 11, 1988  
 Date Reported March 29, 1988

P O No  
 Job No RT077

FOR ES Atlanta/Valh AMSB  
 Address: 97 Executive Park S E, Suite 990  
 Atlanta, Georgia 30329

ATTN: Mr Jim Duncan

Lab Number 000372  
 Sample No UF1 B-15 SS1, 0 5'  
 Date Sampled 2-18-88  
 Time Sampled 1350  
 Date Extracted 2-21-88  
 Date Analyzed 2-19-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880372  
 Sample No.: UF1 B-15 SS1, 0.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1350  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-,a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880372  
Sample No.: UF1 B-15 SS1, 0.5'  
Date Sampled: 2-10-88  
Time Sampled: 1350  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SM 8278  
Matrix Soil

page 2 of 2

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P O No  
Job No AT977

FOR: ES: Atlanta/Volk AMCS  
Address: 57 Executive Park S E, Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880372  
Sample No.: UFI 8-19 881. 0 5  
Date Sampled: 2-18-88  
Time Sampled: 1350  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Laura Kuck*

Analyst

*Jim Duncan*

Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrale - SU 8270**  
**Matrix Soil**

page 1 of 5

Date Received: February 11, 1988  
 Date Reported: March 29, 1988

P O No  
 Job No AT077

FOR: ES Atlanta/Unk AMES  
 Address: 57 Executive Park S E, Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr Jim Duncan

Lab Number: 880373  
 Sample No: UF1 B-15 SS2, 3 5  
 Date Sampled: 2-10-88  
 Time Sampled: 1500  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limite mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylemine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Uolk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880373  
 Sample No.: UF1 B-15 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1500  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limit mg/kg	ANALYTICAL RESULTS	
		mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880373  
 Sample No.: UF1 B-15 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1500  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---*	ND
Aniline	---*	ND
4-Aminobiphenyl	---*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---*	ND
7,12-Dimethylbenz(a)anthracene	---*	ND
a-,a-Dimethylphenethylamine	---*	ND
Diphenylamine	---*	ND
1,2-Diphenylhydrazine	---*	ND
Ethyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
Methyl methanesulfonate	---*	ND
3-Methylcholanthrene	---*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---*	ND
2-Naphthylamine	---*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---*	ND
N-Nitrosopiperidine	---*	ND
Pentachlorobenzene	---*	ND
Pentachloronitrobenzene	---*	ND
Phenacetin	---*	ND
2-Picoline	---*	ND
Pronamide	---*	ND
1,2,4,5-Tetrachlorobenzene	---*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SM 0270  
Matrix Soil

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Date Received: February 11, 1988  
Date Reported: March 25, 1988

P O No  
Job No AT077

FOR: ES:Atlanta/Uolk ANGB  
Address: 57 Executive Park S E, Suite 590  
Atlanta, Georgia 30329

ATTN Mr Jim Duncan

Lab Number: 880373  
Sample No.: UF1 B-15 882. J 5  
Date Sampled: 2-10-88  
Time Sampled: 1988  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	--*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SU 0270  
 Matrix: Soil

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Date Received: February 11, 1988  
 Date Reported: March 29, 1988

P. O. No.:  
 Job No.: AT077

FOR: ES: Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880373  
 Sample No.: UF1 B-15 SS2, 3.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1500  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS
		mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Laura Kueck*  
 Analyst

*W. B. Burton*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880374  
 Sample No.: UF1 B-15 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1510  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND



Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

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Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880374  
 Sample No.: UF1 B-15 SS3, 8.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1510  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS	
	Limit mg/kg	mg/kg	
Phenanthrene	0.66	ND	
Anthracene	0.66	ND	
Dibutyl phthalate	0.66	ND	
Fluoranthene	0.66	ND	
4-Chlorophenyl phenyl ether	0.66	ND	
Pyrene	0.66	ND	
Butyl Benzyl phthalate	0.66	ND	
Bis(2-ethylhexyl) phthalate	0.66	ND	
Chrysene	0.66	ND	
4-Bromophenyl phenyl ether	0.66	ND	
Benzo(a)anthracene	0.66	ND	
Di-n-octylphthalate	0.66	ND	
Benzo(b)fluoranthene	0.66	ND	
Benzo(k)fluoranthene	0.66	ND	
Benzidine	6.0	ND	
3,3'-Dichlorobenzidine	1.3	ND	
Benzo(a)pyrene	0.66	ND	
Indeno(1,2,3-cd)pyrene	0.66	ND	
Dibenzo(a,h)anthracene	0.66	ND	
Benzo(ghi)perylene	0.66	ND	
Benzyl Alcohol	1.3	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 0270  
 Matrix: Soil  
 (continued)

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Date Received: February 11, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

For: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880374  
 Sample No.: UF1 B-15 SS3, 0.5'  
 Date Sampled: 2-10-88  
 Time Sampled: 1510  
 Date Extracted: 2-21-88  
 Date Analyzed: 3-15-88

Compound	Detection	Analytical Results
	Limits mg/kg	mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880374  
Sample No.: UF1 B-15 SS3, 8.5'  
Date Sampled: 2-10-88  
Time Sampled: 1510  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
Alpha-BHC	--*	ND	
Gamma-BHC	—*	ND	
Beta-BHC	0.4	ND	
Heptachlor	0.2	ND	
Delta-BHC	0.3	ND	
Aldrin	0.2	ND	
Heptachlor epoxide	0.2	ND	
Endosulfan I	--*	ND	
Dieldrin	0.3	ND	
4,4'-DDE	0.6	ND	
Endrin	--*	ND	
Endosulfan II	--*	ND	
4,4'-DDD	0.3	ND	
4,4'-DDT	0.5	ND	
Endosulfan Sulfate	0.6	ND	
Endrin aldehyde	--*	ND	
Endrin Ketone	--*	ND	
Chlordane	4.0	ND	
Methoxychlor	--*	ND	
Toxaphene	4.0	ND	
Aroclor-1016	4.0	ND	
Aroclor-1221	4.0	ND	
Aroclor-1232	4.0	ND	
Aroclor-1242	4.0	ND	
Aroclor-1248	4.0	ND	
Aroclor-1254	4.0	ND	
Aroclor-1260	4.0	ND	

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SU 0270  
Matrix: Soil

page 5 of 5

Date Received: February 11, 1988  
Date Reported: March 25, 1988

P O No  
Job No AT077

FOR: ES:Atlanta/Uolk ANGB  
Address: 57 Executive Park S.E., Suite 390  
Atlanta, Georgia 30329

ATTN: Mr Jim Duncan

Lab Number: 880374  
Sample No.: UF1 B-15 S83, 0 5  
Date Sampled: 2-10-88  
Time Sampled: 1510  
Date Extracted: 2-21-88  
Date Analyzed: 3-15-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

*Laura Kueck*  
Analyst

*Al W. Burton*  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SU 9270  
 Matrix Soil

Page 1 of 1

Date Received January 27, 1988  
 Date Reported March 3, 1988

P.O. No.  
 Job No. HT077

FOR ES Atlanta/Volk Field ANGB  
 Address 57 Executive Park S E Suite 590  
 Atlanta, Georgia 30329

ATTN Mr Jim Duncan

Lab Number 990187  
 Sample No. DF1 8-2: SS-1, 1 )  
 Date Sampled 1-26-88  
 Time Sampled 1210  
 Date Extracted 2-1-88  
 Date Analyzed 2-8-89

Compound	Detection	ANALYTICAL RESULTS	
	Limits mg/kg	mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No. 1000  
 Job No. AT077

FDR ES: Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 380187  
 Sample No.: UF1 B-21 SS-1, 1 0'  
 Date Sampled: 1-26-88  
 Time Sampled: 1210  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No. \_\_\_\_\_  
 Job No. AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980187  
 Sample No.: UF1 B-21 SS-1, 100  
 Date Sampled: 1-26-88  
 Time Sampled: 1210  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-8-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	---	ND
Aniline	---	ND
4-Aminobiphenyl	---	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	---	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	---	ND
7,12-Dimethylbenz(a)anthracene	---	ND
a-a-Dimethylphenethylamine	---	ND
Diphenylamine	---	ND
1,2-Diphenylhydrazine	---	ND
Ethyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
Methyl methanesulfonate	---	ND
3-Methylcholanthrene	---	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	---	ND
2-Naphthylamine	---	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	---	ND
N-Nitrosopiperidine	---	ND
Pentachlorobenzene	---	ND
Pentachloronitrobenzene	---	ND
Phenacetin	---	ND
2-Picoline	---	ND
Pronamide	---	ND
1,2,4,5-Tetrachlorobenzene	---	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Page 4 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

Proj No  
Job No HT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980187  
Sample No.: UF1 B-21 SS-1, 1 0'  
Date Sampled: 1-26-88  
Time Sampled: 1210  
Date Extracted: 2-1-88  
Date Analyzed: 2-8-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

page 5 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

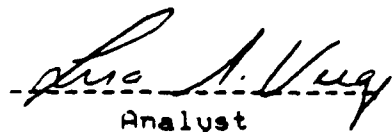
P.O. No.  
 Job No. AT077

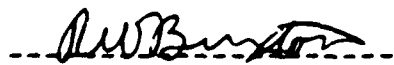
FOR: ES: Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S E, Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880187  
 Sample No.: UF1 B-21 SS-1, 10'  
 Date Sampled: 1-26-88  
 Time Sampled: 1210  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-8-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
2-Chlorophenol	0.66	ND	
2-Nitrophenol	0.66	ND	
Phenol	0.66	ND	
2,4-Dimethylphenol	0.66	ND	
2,4-Dichlorophenol	0.66	ND	
2,4,6-Trichlorophenol	0.66	ND	
4-Chloro-3-methylphenol	1.3	ND	
2,4-Dinitrophenol	3.3	ND	
2,6-Dichlorophenol	--*	ND	
2-Methyl-4,6-Dinitrophenol	3.3	ND	
Pentachlorophenol	3.3	ND	
4-Nitrophenol	3.3	ND	
Benzoic Acid	3.3	ND	
2-Methylphenol	0.66	ND	
3- & 4-Methylphenol	0.66	ND	
2,3,4,6-Tetrachlorophenol	--*	ND	
2,4,5-Trichlorophenol	0.66	ND	

  
 Analyst

  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199

Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-27-88. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No. 100-100000  
 Job No. AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880188  
 Sample No.: UF1 B-22 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1430  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-16-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
1,3-Dichlorobenzene	33	ND
1,4-Dichlorobenzene	33	ND
Hexachloroethane	33	ND
Bis(2-chloroethyl)ether	33	ND
1,2-Dichlorobenzene	33	ND
N-Nitrosodimethylamine	130	ND
Bis(2-chloroisopropyl)ether	33	ND
N-Nitrosodi-n-propyl amine	33	ND
Hexachlorobutadiene	33	ND
1,2,4-Trichlorobenzene	33	ND
Nitrobenzene	33	ND
Isophorone	33	ND
Naphthalene	33	ND
Bis(2-chloroethoxy)methane	33	ND
2-Chloronaphthalene	33	ND
Hexachlorocyclopentadiene	33	ND
Acenaphthylene	33	ND
Acenaphthene	33	ND
Dimethyl phthalate	33	ND
2,6-Dinitrotoluene	33	ND
Fluorene	33	ND
2,4-Dinitrotoluene	33	ND
Diethyl phthalate	33	ND
N-Nitrosodiphenylamine	33	ND
Hexachlorobenzene	33	ND

Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

page 2 of 5

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No. . . . .  
Job No. AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880188  
Sample No.: UF1 B-22 SS1, 0.5'  
Date Sampled: 1-26-88  
Time Sampled: 1430  
Date Extracted: 2-1-88  
Date Analyzed: 2-16-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	33	ND
Anthracene	33	ND
Dibutyl phthalate	33	ND
Fluoranthene	33	ND
4-Chlorophenyl phenyl ether	33	ND
Pyrene	33	ND
Butyl Benzyl phthalate	33	ND
Bis(2-ethylhexyl) phthalate	33	ND
Chrysene	33	ND
4-Bromophenyl phenyl ether	33	ND
Benzo(a)anthracene	33	ND
Di-n-octylphthalate	33	ND
Benzo(b)fluoranthene	33	ND
Benzo(k)fluoranthene	33	ND
Benzidine	300	ND
3,3'-Dichlorobenzidine	65	ND
Benzo(a)pyrene	33	ND
Indeno(1,2,3-cd)pyrene	33	ND
Dibenzo(a,h)anthracene	33	ND
Benzo(ghi)perylene	33	ND
Benzyl Alcohol	65	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix: Soil  
 (continued)

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880188  
 Sample No.: UF1 B-22 SS1, 0.5'  
 Date Sampled: 1-26-88  
 Time Sampled: 1430  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-16-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	65	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	33	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	33	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	160	ND
3-Nitroaniline	160	ND
4-Nitroaniline	160	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

Date Received: January 27, 1988  
Date Reported: March 3, 1988

P.O. No. ....  
Job No. : AT077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN:Mr. Jim Duncan

Lab Number: 880198  
Sample No.: UF1 B-22 SS1, 0.5'  
Date Sampled: 1-26-88  
Time Sampled: 1430  
Date Extracted: 2-1-88  
Date Analyzed: 2-16-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	
	mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	---	ND
Beta-BHC	20	ND
Heptachlor	10	ND
Delta-BHC	15	ND
Aldrin	10	ND
Heptachlor epoxide	10	ND
Endosulfan I	--*	ND
Dieldrin	15	ND
4,4'-DDE	30	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	15	ND
4,4'-DDT	25	ND
Endosulfan Sulfate	30	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	200	ND
Methoxychlor	--*	ND
Toxaphene	200	ND
Aroclor-1016	200	ND
Aroclor-1221	200	ND
Aroclor-1232	200	ND
Aroclor-1242	200	ND
Aroclor-1248	200	ND
Aroclor-1254	200	ND
Aroclor-1260	200	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- SW 8270  
 Matrix: Soil

page 5 of 5

Date Received: January 27, 1988  
 Date Reported: March 3, 1988

P. O. No  
 Job No AT077

FOR: ES:Atlanta/Dolk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr Jim Duncan

Lab Number: 980188  
 Sample No.: UF1 B-22 SS1, 0.5  
 Date Sampled: 1-26-88  
 Time Sampled: 1430  
 Date Extracted: 2-1-88  
 Date Analyzed: 2-16-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	33	ND
2-Nitrophenol	33	ND
Phenol	33	ND
2,4-Dimethylphenol	33	ND
2,4-Dichlorophenol	33	ND
2,4,6-Trichlorophenol	33	ND
4-Chloro-3-methylphenol	65	ND
2,4-Dinitrophenol	160	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	160	ND
Pentachlorophenol	160	ND
4-Nitrophenol	160	ND
Benzoic Acid	160	ND
2-Methylphenol	33	ND
3- & 4-Methylphenol	33	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	33	ND

*Lisa A. Veig*  
 Analyst

*RWB*  
 Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE

Sample(s) No.: 88010186-0199  
Work Order Number 467

This group of samples was received at the Berkeley Laboratory on 1-17-68. It consisted of 14 soil samples for semivolatile organics analysis.

Relative percent differences for certain compounds exceeded the EPA recommended ranges. Corrective action was taken by re-extracting and reanalyzing the quality control sample.

Percent relative differences are within the EPA recommended ranges, although none of the spike compounds are detected in the sample.

Due to the matrix interferences, soil surrogate recoveries for samples 88010188 to 88010189 are diluted out.

All sample results are blank corrected.



ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil

page 1 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880214  
 Sample No.: UF1, B26, SS1, 0'  
 Date Sampled: 1-28-88  
 Time Sampled: 1320  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	ANALYTICAL RESULTS	
		mg/kg	
1,3-Dichlorobenzene	0.66	ND	
1,4-Dichlorobenzene	0.66	ND	
Hexachloroethane	0.66	ND	
Bis(2-chloroethyl)ether	0.66	ND	
1,2-Dichlorobenzene	0.66	ND	
N-Nitrosodimethylamine	2.5	ND	
Bis(2-chloroisopropyl)ether	0.66	ND	
N-Nitrosodi-n-propyl amine	0.66	ND	
Hexachlorobutadiene	0.66	ND	
1,2,4-Trichlorobenzene	0.66	ND	
Nitrobenzene	0.66	ND	
Isophorone	0.66	ND	
Naphthalene	0.66	ND	
Bis(2-chloroethoxy)methane	0.66	ND	
2-Chloronaphthalene	0.66	ND	
Hexachlorocyclopentadiene	0.66	ND	
Acenaphthylene	0.66	ND	
Acenaphthene	0.66	ND	
Dimethyl phthalate	0.66	ND	
2,6-Dinitrotoluene	0.66	ND	
Fluorene	0.66	ND	
2,4-Dinitrotoluene	0.66	ND	
Diethyl phthalate	0.66	ND	
N-Nitrosodiphenylamine	0.66	ND	
Hexachlorobenzene	0.66	ND	

Priority Pollutant Analysis  
Base Neutrals - SW 9270  
Matrix: Soil  
(continued)

page 2 of 3

Date Received: January 29, 1988  
Date Reported: March 4, 1988

P. O. No.  
Job No 4T077

FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr Jim Duncan

Lab Number: 880214  
Sample No.: 0F1, B26, SS1, 0'  
Date Sampled: 1-28-88  
Time Sampled: 1320  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 8270  
 Matrix: Soil  
 (continued)

Page 3 of 5

Date Received: January 29, 1988  
 Date Reported: March 4, 1988

P.O. No.  
 Job No. AT077

For ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880214  
 Sample No.: UF1, B26, SS1, 0  
 Date Sampled: 1-28-88  
 Time Sampled: 1320  
 Date Extracted: 2-2-88  
 Date Analyzed: 3-1-88

Compound	Detection Limits mg/kg	Analytical Results mg/kg
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

page 5 of 5

Date Received: January 29, 1988  
Date Reported: March 4, 1988

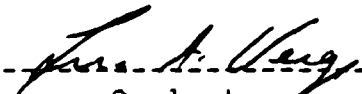
P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980214  
Sample No.: UF1, B26, SS1, 01  
Date Sampled: 1-28-88  
Time Sampled: 1320  
Date Extracted: 2-2-88  
Date Analyzed: 3-1-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil

page 1 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980300  
Sample No.: UF1 B-28 SS1, 1.5'  
Date Sampled: 2-9-88  
Time Sampled: 1600  
Date Extracted: 2-17-88  
Date Analyzed: 3-11-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	mg/kg
	mg/kg	
1,3-Dichlorobenzene	0.66	ND
1,4-Dichlorobenzene	0.66	ND
Hexachloroethane	0.66	ND
Bis(2-chloroethyl)ether	0.66	ND
1,2-Dichlorobenzene	0.66	ND
N-Nitrosodimethylamine	2.5	ND
Bis(2-chloroisopropyl)ether	0.66	ND
N-Nitrosodi-n-propyl amine	0.66	ND
Hexachlorobutadiene	0.66	ND
1,2,4-Trichlorobenzene	0.66	ND
Nitrobenzene	0.66	ND
Isophorone	0.66	ND
Naphthalene	0.66	ND
Bis(2-chloroethoxy)methane	0.66	ND
2-Chloronaphthalene	0.66	ND
Hexachlorocyclopentadiene	0.66	ND
Acenaphthylene	0.66	ND
Acenaphthene	0.66	ND
Dimethyl phthalate	0.66	ND
2,6-Dinitrotoluene	0.66	ND
Fluorene	0.66	ND
2,4-Dinitrotoluene	0.66	ND
Diethyl phthalate	0.66	ND
N-Nitrosodiphenylamine	0.66	ND
Hexachlorobenzene	0.66	ND

Priority Pollutant Analysis  
Base Neutrals - SW 8270  
Matrix: Soil  
(continued)

page 2 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880300  
Sample No.: UF1 B-28 SS1, 1.5'  
Date Sampled: 2-9-88  
Time Sampled: 1600  
Date Extracted: 2-17-88  
Date Analyzed: 3-11-88

Compound	Detection	ANALYTICAL RESULTS
	Limit mg/kg	mg/kg
Phenanthrene	0.66	ND
Anthracene	0.66	ND
Dibutyl phthalate	0.66	ND
Fluoranthene	0.66	ND
4-Chlorophenyl phenyl ether	0.66	ND
Pyrene	0.66	ND
Butyl Benzyl phthalate	0.66	ND
Bis(2-ethylhexyl) phthalate	0.66	ND
Chrysene	0.66	ND
4-Bromophenyl phenyl ether	0.66	ND
Benzo(a)anthracene	0.66	ND
Di-n-octylphthalate	0.66	ND
Benzo(b)fluoranthene	0.66	ND
Benzo(k)fluoranthene	0.66	ND
Benzidine	6.0	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo(a)pyrene	0.66	ND
Indeno(1,2,3-cd)pyrene	0.66	ND
Dibenzo(a,h)anthracene	0.66	ND
Benzo(ghi)perylene	0.66	ND
Benzyl Alcohol	1.3	ND

Priority Pollutant Analysis  
 Base Neutrals - SW 9270  
 Matrix: Soil  
 (continued)

Date Received: February 10, 1988  
 Date Reported: March 15, 1988

P.O. No.:  
 Job No.: AT077

For: ES:Atlanta/Volk Field ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 980300  
 Sample No.: UF1 B-28 SS1, 1.5'  
 Date Sampled: 2-9-88  
 Time Sampled: 1600  
 Date Extracted: 2-17-88  
 Date Analyzed: 3-11-88

Compound	Detection	Analytical Results
	Limits	mg/kg
	mg/kg	
Acetophenone	--*	ND
Aniline	--*	ND
4-Aminobiphenyl	--*	ND
4-Chloroaniline	1.3	ND
1-Chloronaphthalene	--*	ND
Dibenzofuran	0.66	ND
p-Dimethylaminoazobenzene	--*	ND
7,12-Dimethylbenz(a)anthracene	--*	ND
a-,a-Dimethylphenethylamine	--*	ND
Diphenylamine	--*	ND
1,2-Diphenylhydrazine	--*	ND
Ethyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
Methyl methanesulfonate	--*	ND
3-Methylcholanthrene	--*	ND
2-Methylnaphthalene	0.66	ND
1-Naphthylamine	--*	ND
2-Naphthylamine	--*	ND
2-Nitroaniline	3.3	ND
3-Nitroaniline	3.3	ND
4-Nitroaniline	3.3	ND
N-Nitroso-di-n-butylamine	--*	ND
N-Nitrosopiperidine	--*	ND
Pentachlorobenzene	--*	ND
Pentachloronitrobenzene	--*	ND
Phenacetin	--*	ND
2-Picoline	--*	ND
Pronamide	--*	ND
1,2,4,5-Tetrachlorobenzene	--*	ND

\*EPA has not yet determined detection limits for these compounds.



Priority Pollutant Analysis  
Pesticides and PCBs - SW 8270  
Matrix: Soil

page 4 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

P.O. No.:  
Job No.: AT077

FOR: ES:Atlanta/Volk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880300  
Sample No.: UF1 B-28 SS1, 1.5'  
Date Sampled: 2-9-88  
Time Sampled: 1600  
Date Extracted: 2-17-88  
Date Analyzed: 3-11-88

Compound	Detection	ANALYTICAL RESULTS
	Limits mg/kg	mg/kg
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	0.4	ND
Heptachlor	0.2	ND
Delta-BHC	0.3	ND
Aldrin	0.2	ND
Heptachlor epoxide	0.2	ND
Endosulfan I	--*	ND
Dieldrin	0.3	ND
4,4'-DDE	0.6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	0.3	ND
4,4'-DDT	0.5	ND
Endosulfan Sulfate	0.6	ND
Endrin aldehyde	--*	ND
Endrin Ketone	--*	ND
Chlordane	4.0	ND
Methoxychlor	--*	ND
Toxaphene	4.0	ND
Aroclor-1016	4.0	ND
Aroclor-1221	4.0	ND
Aroclor-1232	4.0	ND
Aroclor-1242	4.0	ND
Aroclor-1248	4.0	ND
Aroclor-1254	4.0	ND
Aroclor-1260	4.0	ND

\* EPA has not yet determined detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- SW 8270  
Matrix: Soil

page 5 of 5

Date Received: February 10, 1988  
Date Reported: March 15, 1988

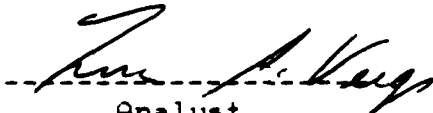
P.O. No.:  
Job No.: AT077


FOR: ES:Atlanta/Oolk Field ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number: 880300  
Sample No.: QF1 B-28 SS1, 1.5'  
Date Sampled: 2-9-88  
Time Sampled: 1600  
Date Extracted: 2-17-88  
Date Analyzed: 3-11-88

Compound	Detection	ANALYTICAL RESULTS
	Limits	mg/kg
	mg/kg	
2-Chlorophenol	0.66	ND
2-Nitrophenol	0.66	ND
Phenol	0.66	ND
2,4-Dimethylphenol	0.66	ND
2,4-Dichlorophenol	0.66	ND
2,4,6-Trichlorophenol	0.66	ND
4-Chloro-3-methylphenol	1.3	ND
2,4-Dinitrophenol	3.3	ND
2,6-Dichlorophenol	--*	ND
2-Methyl-4,6-Dinitrophenol	3.3	ND
Pentachlorophenol	3.3	ND
4-Nitrophenol	3.3	ND
Benzoic Acid	3.3	ND
2-Methylphenol	0.66	ND
3- & 4-Methylphenol	0.66	ND
2,3,4,6-Tetrachlorophenol	--*	ND
2,4,5-Trichlorophenol	0.66	ND

  
Analyst

  
Laboratory Supervisor

\*EPA has not yet determined detection limits for these compounds.

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

PRIORITY POLLUTANT ANALYSIS  
 PESTICIDES & PCB'S  
 EPA 625  
 MATRIX: WATER

Client: ES Atlanta  
 Attn: Ernie Daly  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Compound	Detection Limits	
Aldrin	2	ug/L
Alpha-BHC	2*	ug/L
Beta-BHC	4	ug/L
Delta-BHC	3	ug/L
Gamma-BHC (Lindane)	2*	ug/L
Chlordane	40	ug/L
4,4'-DDD	3	ug/L
4,4'-DDE	6	ug/L
4,4'-DDT	5	ug/L
Dieldrin	3	ug/L
Endosulfan I	8*	ug/L
Endosulfan II	8*	ug/L
Endosulfan sulfate	6	ug/L
Endrin	8*	ug/L
Endrin aldehyde	3*	ug/L
Heptachlor	2	ug/L
Heptachlor epoxide	2	ug/L
Toxaphene	40	ug/L
PCB-1016	40	ug/L
PCB-1221	40	ug/L
PCB-1232	40	ug/L
PCB-1242	40	ug/L
PCB-1248	40	ug/L
PCB-1254	40	ug/L
PCB-1260	40	ug/L

\* Denotes instrument detection limit. EPA has not yet determined method detection limits for these compounds.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880567	880568
Sample No.:	UF, ET-1, GW1, ES	UF, ET-2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	1115	1345
Date Extracted:	3-12-88	3-14-88
Date Analyzed:	4-12-88	4-12-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	NO	NO
1,4-Dichlorobenzene	2	NO	NO
Hexachloroethane	2	NO	NO
Bis(2-chloroethyl)ether	6	NO	NO
1,2-Dichlorobenzene	2	NO	NO
N-Nitrosodimethylamine	25	NO	NO
Bis(2-chloroisopropyl)ether	6	NO	NO
N-Nitrosodi-n-propyl amine	25	NO	NO
Hexachlorobutadiene	1	NO	NO
1,2,4-Trichlorobenzene	2	NO	NO
Nitrobenzene	2	NO	NO
Isophorone	2	NO	NO
Naphthalene	2	NO	NO
Bis(2-chloroethoxy)methane	5	NO	NO
2-Chloronaphthalene	2	NO	NO
Hexachlorocyclopentadiene	25	NO	NO
Acenaphthylene	4	NO	NO
Acenaphthene	2	NO	NO
Dimethyl phthalate	2	NO	NO
2,6-Dinitrotoluene	2	NO	NO
Fluorene	2	NO	NO
2,4-Dinitrotoluene	2	NO	NO
Diethyl phthalate	2	NO	NO
N-Nitrosodiphenylamine	2	NO	NO
Hexachlorobenzene	2	NO	NO

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880567	880568
Sample Number:	UF, ET-1, GW1, ES	UF, ET-2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	1115	1345
Date Extracted:	3-12-88	3-14-88
Date Analyzed:	4-12-88	4-12-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	NO	NO
Anthracene	2	NO	NO
Dibutyl phthalate	3	NO	NO
Fluoranthene	2	NO	NO
4-Chlorophenyl phenyl ether	4	NO	NO
Pyrene	2	NO	NO
Butyl Benzyl phthalate	3	NO	NO
Bis(2-ethylhexyl) phthalate	3	NO	NO
Chrysene	3	NO	NO
4-Bromophenyl phenyl ether	2	NO	NO
Benzo(a)anthracene	8	NO	NO
Di-n-octylphthalate	3	NO	NO
Benzo(b)fluoranthene	5	NO	NO
Benzo(k)fluoranthene	3	NO	NO
Benzidine	60	NO	NO
3,3'-Dichlorobenzidine	40	NO	NO
Benzo(a)pyrene	3	NO	NO
Indeno(1,2,3-cd)pyrene	4	NO	NO
Dibenzo(a,h)anthracene	3	NO	NO
Benzo(ghi)perylene	4	NO	NO

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

page 3 of 4

Date Received: March 9, 1988  
Date Reported: April 19, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	880567	880568
Sample No.:	UF, ET-1, GW1, ES	UF, ET-2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	1115	1345
Date Extracted:	3-12-88	3-14-88
Date Analyzed:	4-12-88	4-12-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	ug/L
Alpha-BHC	--*	NO	NO
Gamma-BHC	—*	NO	NO
Beta-BHC	4	NO	NO
Heptachlor	2	NO	NO
Delta-BHC	3	NO	NO
Aldrin	2	NO	NO
Heptachlor epoxide	2	NO	NO
Endosulfan I	--*	NO	NO
Dieldrin	3	NO	NO
4,4'-DDE	6	NO	NO
Endrin	--*	NO	NO
Endosulfan II	--*	NO	NO
4,4'-DDD	3	NO	NO
4,4'-DDT	5	NO	NO
Endosulfan Sulfate	6	NO	NO
Endrin aldehyde	--*	NO	NO
Chlordane	40	NO	NO
Toxaphene	40	NO	NO
PCB-1016	40	NO	NO
PCB-1221	40	NO	NO
PCB-1232	40	NO	NO
PCB-1242	40	NO	NO
PCB-1248	40	NO	NO
PCB-1254	40	NO	NO
PCB-1260	40	NO	NO

\* Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.:  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANCB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880567	880568
Sample No.:	UF, ET-1, GW1, ES	UF, ET-2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	1115	1345
Date Extracted:	3-12-88	3-14-88
Date Analyzed:	4-12-88	4-12-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
2-Chlorophenol	3	66	66
2-Nitrophenol	4	66	66
Phenol	2	66	66
2,4-Dimethylphenol	3	66	66
2,4-Dichlorophenol	3	66	66
2,4,6-Trichlorophenol	3	66	66
4-Chloro-3-methylphenol	3	66	66
2,4-Dinitrophenol	40	66	66
2-Methyl-4,6-Dinitrophenol	20	66	66
Pentachlorophenol	4	66	66
4-Nitrophenol	3	66	66

*Saura Kuek*  
 -----  
 Analyst

*RWB*  
 -----  
 Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE  
Work Order Number 534  
Sample No. 88010568

Matrix effects caused the relative percent difference for 4-chloro-3-methylphenol to be higher than EPA recommended guidelines. Analysis of spiked blanks showed the laboratory to be in control.



ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water

page 1 of 4

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 880569  
 Sample No.: UF, ET-3, GW1, ES  
 Date Sampled: 3-8-88  
 Time Sampled: 1500  
 Date Extracted: 3-12-88  
 Date Analyzed: 4-13-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits ug/L	ug/L	
1,3-Dichlorobenzene	2	NO	
1,4-Dichlorobenzene	2	NO	
Hexachloroethane	2	NO	
Bis(2-chloroethyl)ether	6	NO	
1,2-Dichlorobenzene	2	NO	
N-Nitrosodimethylamine	25	NO	
Bis(2-chloroisopropyl)ether	6	NO	
N-Nitrosodi-n-propyl amine	25	NO	
Hexachlorobutadiene	1	NO	
1,2,4-Trichlorobenzene	2	NO	
Nitrobenzene	2	NO	
Isophorone	2	NO	
Naphthalene	2	51	
Bis(2-chloroethoxy)methane	5	NO	
2-Chloronaphthalene	2	NO	
Hexachlorocyclopentadiene	25	NO	
Acenaphthylene	4	NO	
Acenaphthene	2	NO	
Dimethyl phthalate	2	NO	
2,6-Dinitrotoluene	2	NO	
Fluorene	2	NO	
2,4-Dinitrotoluene	6	NO	
Diethyl phthalate	2	NO	
N-Nitrosodiphenylamine	2	NO	
Hexachlorobenzene	2	NO	

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 880569  
 Sample No.: UF, ET-3, GW1, ES  
 Date Sampled: 3-8-88  
 Time Sampled: 1500  
 Date Extracted: 3-12-88  
 Date Analyzed: 4-13-88

Compound	Detection	ANALYTICAL RESULTS
	Limit ug/L	ug/L
Phenanthrene	5	NO
Anthracene	2	NO
Dibutyl phthalate	3	NO
Fluoranthene	2	NO
4-Chlorophenyl phenyl ether	4	NO
Pyrene	2	NO
Butyl Benzyl phthalate	3	NO
Bis(2-ethylhexyl) phthalate	3	28
Chrysene	3	NO
4-Bromophenyl phenyl ether	2	NO
Benzo(a)anthracene	8	NO
Di-n-octylphthalate	3	NO
Benzo(b)fluoranthene	5	NO
Benzo(k)fluoranthene	3	NO
Benzidine	60	NO
3,3'-Dichlorobenzidine	20	NO
Benzo(a)pyrene	3	NO
Indeno(1,2,3-cd)pyrene	4	NO
Dibenzo(a,h)anthracene	3	NO
Benzo(ghi)perylene	4	NO

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

page 3 of 4

Date Received: March 9, 1988  
Date Reported: April 19, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number: 880569  
Sample No.: UF, ET-3, GW1, ES  
Date Sampled: 3-8-88  
Time Sampled: 1500  
Date Extracted: 3-12-88  
Date Analyzed: 4-13-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS ug/L
Alpha-BHC	--*	ND
Gamma-BHC	--*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	3	ND
Aldrin	3	ND
Heptachlor epoxide	3	ND
Endosulfan I	--*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	--*	ND
Chlordane	40	ND
Toxaphene	40	ND
PCB-1016	40	ND
PCB-1221	40	ND
PCB-1232	40	ND
PCB-1242	40	ND
PCB-1248	40	ND
PCB-1254	40	ND
PCB-1260	40	ND

\* EPA has not yet published detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- EPA 625  
Matrix: Water

page 4 of 4

Date Received: March 9, 1988  
Date Reported: April 19, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number: 880569  
Sample No.: UF, ET-3, GW1, ES  
Date Sampled: 3-8-88  
Time Sampled: 1500  
Date Extracted: 3-12-88  
Date Analyzed: 4-13-88

Compound	Detection	ANALYTICAL RESULTS
	Limits ug/L	ug/L
2-Chlorophenol	3	NO
2-Nitrophenol	4	NO
Phenol	2	27
2,4-Dimethylphenol	3	NO
2,4-Dichlorophenol	3	NO
2,4,6-Trichlorophenol	3	NO
4-Chloro-3-methylphenol	3	NO
2,4-Dinitrophenol	40	NO
2-Methyl-4,6-Dinitrophenol	20	NO
Pentachlorophenol	4	76
4-Nitrophenol	2	NO

*Laura Kuek*  
-----  
Analyst

*W. B. Burton*  
-----  
Laboratory Supervisor

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrals - EPA 625**  
**Matrix: Water**

page 1 of 4

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	88030572	88030573
Sample No.:	VF, ET-5, GW1, ES	VF, ET-4, GW1, ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	1130	1030
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-13-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	ND
N-Nitrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)ether	6	ND	ND
N-Nitrosodi-n-propyl amine	25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	38	55
Bis(2-chloroethoxy)methane	5	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	3
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

page 2 of 4

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	88030572	88030573
Sample Number:	VF, ET-5, GW1, ES	VF, ET-4, GW1, ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	1130	1030
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-13-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl ether	4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phthalate	3	ND	1100
Chrysene	3	ND	ND
4-Bromophenyl phenyl ether	2	ND	ND
Benzo(a)anthracene	8	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene	3	ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

Date Received: March 10, 1988  
Date Reported: April 21, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	88030572	88030573
Sample No.:	VF, ET-5, GW1, ES	VF, ET-4, GW1, ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	1130	1030
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-13-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Alpha-BHC	--*	ND	ND
Gamma-BHC	---	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	--*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	--*	ND	ND
Endosulfan II	--*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	--*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

\* Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

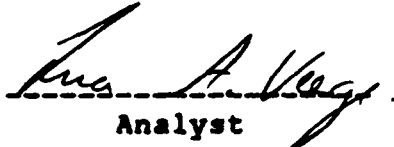
Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	88030572	88030573
Sample No.:	VF, ET-5, GW1, ES	VF, ET-4, GW1, ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	1130	1030
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-13-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	28	ND
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophenol	20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

  
 Analyst

  
 Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrals - EPA 625**  
**Matrix: Water**

page 1 of 4

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 88030576  
 Sample No.: VF,ET-6,GW1,ES  
 Date Sampled: 3-9-88  
 Time Sampled: 0930  
 Date Extracted: 3-14-88  
 Date Analyzed: 4-14-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS  ug/L
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Hexachloroethane	2	ND
Bis(2-chloroethyl)ether	6	ND
1,2-Dichlorobenzene	2	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)ether	6	ND
N-Nitrosodi-n-propyl amine	25	ND
Hexachlorobutadiene	1	ND
1,2,4-Trichlorobenzene	2	ND
Nitrobenzene	2	ND
Isophorone	2	ND
Naphthalene	2	ND
Bis(2-chloroethoxy)methane	5	ND
2-Chloronaphthalene	2	ND
Hexachlorocyclopentadiene	25	ND
Acenaphthylene	4	ND
Acenaphthene	2	ND
Dimethyl phthalate	2	ND
2,6-Dinitrotoluene	2	ND
Fluorene	2	ND
2,4-Dinitrotoluene	6	ND
Diethyl phthalate	2	ND
N-Nitrosodiphenylamine	2	ND
Hexachlorobenzene	2	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

page 2 of 4

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 88030576  
 Sample No.: VF,ET-6,GW1,ES  
 Date Sampled: 3-9-88  
 Time Sampled: 0930  
 Date Extracted: 3-14-88  
 Date Analyzed: 4-14-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS ug/L
Phenanthrene	5	ND
Anthracene	2	ND
Dibutyl phthalate	3	ND
Fluoranthene	2	ND
4-Chlorophenyl phenyl ether	4	ND
Pyrene	2	ND
Butyl Benzyl phthalate	3	ND
Bis(2-ethylhexyl) phthalate	3	ND
Chrysene	3	ND
4-Bromophenyl phenyl ether	2	ND
Benzo(a)anthracene	8	ND
Di-n-octylphthalate	3	ND
Benzo(b)fluoranthene	5	ND
Benzo(k)fluoranthene	3	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	20	ND
Benzo(a)pyrene	3	ND
Indeno(1,2,3-cd)pyrene	4	ND
Dibenzo(a,h)anthracene	3	ND
Benzo(ghi)perylene	4	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

page 3 of 4

Date Received: March 10, 1988  
Date Reported: April 21, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number: 88030576  
Sample No.: VP,ET-6,GW1,ES  
Date Sampled: 3-9-88  
Time Sampled: 0930  
Date Extracted: 3-14-88  
Date Analyzed: 4-14-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS ug/L
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	3	ND
Aldrin	3	ND
Heptachlor epoxide	3	ND
Endosulfan I	--*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	--*	ND
Chlordane	40	ND
Toxaphene	40	ND
PCB-1016	40	ND
PCB-1221	40	ND
PCB-1232	40	ND
PCB-1242	40	ND
PCB-1248	40	ND
PCB-1254	40	ND
PCB-1260	40	ND

\* EPA has not yet published detection limits for these compounds.

Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

Date Received: March 10, 1988  
 Date Reported: April 21, 1988  
 P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 88030576  
 Sample No.: VP,ET-6,GW1,ES  
 Date Sampled: 3-9-88  
 Time Sampled: 0930  
 Date Extracted: 3-14-88  
 Date Analyzed: 4-14-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS ug/L
2-Chlorophenol	3	ND
2-Nitrophenol	4	ND
Phenol	2	ND
2,4-Dimethylphenol	3	ND
2,4-Dichlorophenol	3	ND
2,4,6-Trichlorophenol	3	ND
4-Chloro-3-methylphenol	3	ND
2,4-Dinitrophenol	40	ND
2-Methyl-4,6-Dinitrophenol	20	ND
Pentachlorophenol	4	ND
4-Nitrophenol	2	ND

*Lisa A. Vergy*  
 Analyst

*Jim Burston*  
 Laboratory Supervisor

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CASE NARRATIVE  
Work Order Number 538  
Sample Nos. 88030972 - 88030976

Matrix effects caused the relative percent difference for 4-chloro-3-methylphenol to be higher than EPA recommended guidelines. Analysis of spiked blanks showed the laboratory to be in control.

**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrals - EPA 625**  
**Matrix: Water**

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	88030574	88030575
Sample No.:	VF,13-W1,GW1,ES	VF,ET-7,GW1,ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	0800	0900
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-14-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	ND
N-Nitrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)ether	6	ND	ND
N-Nitrosodi-n-propyl amine	25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	ND	26
Bis(2-chloroethoxy)methane	5	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

page 2 of 4

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	88030574	88030575
Sample Number:	VF,13-W1,GW1,ES	VF,ET-7,GW1,ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	0800	0900
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-14-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl ether	4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phthalate	3	ND	ND
Chrysene	3	ND	ND
4-Bromophenyl phenyl ether	2	ND	ND
Benzo(a)anthracene	8	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene	3	ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

Date Received: March 10, 1988  
Date Reported: April 21, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	88030574	88030575
Sample No.:	VF,13-W1,GW1,ES	VF,ET-7,GW1,ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	0800	0900
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-14-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Alpha-BHC	--*	ND	ND
Gamma-BHC	---	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	--*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	--*	ND	ND
Endosulfan II	--*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	--*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

\* Detection limits have not yet been determined for these compounds



Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

Date Received: March 10, 1988  
 Date Reported: April 21, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	88030574	88030575
Sample No.:	VF,13-W1,GW1,ES	VF,ET-7,GW1,ES
Date Sampled:	3-9-88	3-9-88
Time Sampled:	0800	0900
Date Extracted:	3-14-88	3-14-88
Date Analyzed:	4-13-88	4-14-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	ND	3
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophenol	20	ND	ND
Pentachlorophenol	4	ND	5
4-Nitrophenol	3	ND	ND

  
 Analyst

  
 Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrals - EPA 625**  
**Matrix: Water**

page 1 of 4

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 880540  
 Sample No.: UF, 1-W1, GW1, ES  
 Date Sampled: 3-04-88  
 Time Sampled: 1545  
 Date Extracted: 3-07-88  
 Date Analyzed: 3-17-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS ug/L
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Hexachloroethane	2	ND
Bis(2-chloroethyl)ether	6	ND
1,2-Dichlorobenzene	2	ND
N-Nitrosodimethylamine	25	ND
Bis(2-chloroisopropyl)ether	6	ND
N-Nitrosodi-n-propyl amine	25	ND
Hexachlorobutadiene	1	ND
1,2,4-Trichlorobenzene	2	ND
Nitrobenzene	2	ND
Isophorone	2	ND
Naphthalene	2	2.3
Bis(2-chloroethoxy)methane	5	ND
2-Chloronaphthalene	2	ND
Hexachlorocyclopentadiene	25	ND
Acenaphthylene	4	ND
Acenaphthene	2	ND
Dimethyl phthalate	2	ND
2,6-Dinitrotoluene	2	ND
Fluorene	2	ND
2,4-Dinitrotoluene	6	ND
Diethyl phthalate	2	ND
N-Nitrosodiphenylamine	2	ND
Hexachlorobenzene	2	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

page 2 of 4

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number: 880540  
 Sample No.: UF, 1-W1, GW1, ES  
 Date Sampled: 3-04-88  
 Time Sampled: 1545  
 Date Extracted: 3-07-88  
 Date Analyzed: 3-17-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS ug/L
Phenanthrene	5	ND
Anthracene	2	ND
Dibutyl phthalate	3	ND
Fluoranthene	2	ND
4-Chlorophenyl phenyl ether	4	ND
Pyrene	2	ND
Butyl Benzyl phthalate	3	ND
Bis(2-ethylhexyl) phthalate	3	9.0
Chrysene	3	ND
4-Bromophenyl phenyl ether	2	ND
Benzo(a)anthracene	8	ND
Di-n-octylphthalate	3	ND
Benzo(b)fluoranthene	5	ND
Benzo(k)fluoranthene	3	ND
Benzidine	60	ND
3,3'-Dichlorobenzidine	20	ND
Benzo(a)pyrene	3	ND
Indeno(1,2,3-cd)pyrene	4	ND
Dibenzo(a,h)anthracene	3	ND
Benzo(ghi)perylene	4	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

page 3 of 4

Date Received: March 5, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES: Atlanta/Volk ANGB  
Address: 57 Executive Park S. E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number: 880540  
Sample No.: UF, 1-W1, GW1, ES  
Date Sampled: 3-04-88  
Time Sampled: 1545  
Date Extracted: 3-07-88  
Date Analyzed: 3-17-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS ug/L
Alpha-BHC	--*	ND
Gamma-BHC	—*	ND
Beta-BHC	4	ND
Heptachlor	2	ND
Delta-BHC	3	ND
Aldrin	3	ND
Heptachlor epoxide	3	ND
Endosulfan I	--*	ND
Dieldrin	3	ND
4,4'-DDE	6	ND
Endrin	--*	ND
Endosulfan II	--*	ND
4,4'-DDD	3	ND
4,4'-DDT	5	ND
Endosulfan Sulfate	6	ND
Endrin aldehyde	--*	ND
Chlordane	40	ND
Toxaphene	40	ND
PCB-1016	40	ND
PCB-1221	40	ND
PCB-1232	40	ND
PCB-1242	40	ND
PCB-1248	40	ND
PCB-1254	40	ND
PCB-1260	40	ND

\* EPA has not yet published detection limits for these compounds.

Priority Pollutant Analysis  
Acid Extractables -- EPA 625  
Matrix: Water

page 4 of 4

Date Received: March 5, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S. E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number: 880540  
Sample No.: UF, 1-W1, GW1, ES  
Date Sampled: 3-04-88  
Time Sampled: 1545  
Date Extracted: 3-07-88  
Date Analyzed: 3-17-88

Compound	Detection	ANALYTICAL RESULTS
	Limits ug/L	ug/L
2-Chlorophenol	3	ND
2-Nitrophenol	4	ND
Phenol	2	ND
2,4-Dimethylphenol	3	ND
2,4-Dichlorophenol	3	ND
2,4,6-Trichlorophenol	3	ND
4-Chloro-3-methylphenol	3	ND
2,4-Dinitrophenol	40	ND
2-Methyl-4,6-Dinitrophenol	20	ND
Pentachlorophenol	4	ND
4-Nitrophenol	2	ND

*Laura Kuek*  
Analyst

*MW Bryson*  
Laboratory Supervisor

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water

page 1 of 4

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Uolk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880565	880566
Sample No.:	UF, 12-W3, GW1, ES	UF, 1-W2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	0800	0930
Date Extracted:	3-12-88	3-12-88
Date Analyzed:	4-12-88	4-08-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	ND
N-Nitrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)ether	6	ND	ND
N-Nitrosodi-n-propyl amine	25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	ND	ND
Bis(2-chloroethoxy)methane	5	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

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Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880565	880566
Sample Number:	UF, 12-W3, GW1, ES	UF, 1-W2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	0800	0930
Date Extracted:	3-12-88	3-12-88
Date Analyzed:	4-12-88	4-08-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	NO	NO
Anthracene	2	NO	NO
Dibutyl phthalate	3	NO	NO
Fluoranthene	2	NO	NO
4-Chlorophenyl phenyl ether	4	NO	NO
Pyrene	2	NO	NO
Butyl Benzyl phthalate	3	NO	NO
Bis(2-ethylhexyl) phthalate	3	NO	NO
Chrysene	3	NO	NO
4-Bromophenyl phenyl ether	2	NO	NO
Benzo(a)anthracene	8	NO	NO
Di-n-octylphthalate	3	NO	NO
Benzo(b)fluoranthene	5	NO	NO
Benzo(k)fluoranthene	3	NO	NO
Benzidine	60	NO	NO
3,3'-Dichlorobenzidine	40	NO	NO
Benzo(a)pyrene	3	NO	NO
Indeno(1,2,3-cd)pyrene	4	NO	NO
Dibenzo(a,h)anthracene	3	NO	NO
Benzo(ghi)perylene	4	NO	NO

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

Date Received: March 9, 1988  
Date Reported: April 19, 1988

P.O. No.: .....  
Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	880565	880566
Sample No.:	UF, 12-W3, GW1, ES	UF, 1-W2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	0800	0930
Date Extracted:	3-12-88	3-12-88
Date Analyzed:	4-12-88	4-08-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	ug/L
Alpha-BHC	--*	NO	NO
Gamma-BHC	—*	NO	NO
Beta-BHC	4	NO	NO
Heptachlor	2	NO	NO
Delta-BHC	3	NO	NO
Aldrin	2	NO	NO
Heptachlor epoxide	2	NO	NO
Endosulfan I	--*	NO	NO
Dieldrin	3	NO	NO
4,4'-DDE	6	NO	NO
Endrin	--*	NO	NO
Endosulfan II	--*	NO	NO
4,4'-DDD	3	NO	NO
4,4'-DDT	5	NO	NO
Endosulfan Sulfate	6	NO	NO
Endrin aldehyde	--*	NO	NO
Chlordane	40	NO	NO
Toxaphene	40	NO	NO
PCB-1016	40	NO	NO
PCB-1221	40	NO	NO
PCB-1232	40	NO	NO
PCB-1242	40	NO	NO
PCB-1248	40	NO	NO
PCB-1254	40	NO	NO
PCB-1260	40	NO	NO

\* Detection limits have not yet been determined for these compounds



Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

Date Received: March 9, 1988  
 Date Reported: April 19, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880565	880566
Sample No.:	UF, 12-W3, GW1, ES	UF, 1-W2, GW1, ES
Date Sampled:	3-8-88	3-8-88
Time Sampled:	0800	0930
Date Extracted:	3-12-88	3-12-88
Date Analyzed:	4-12-88	4-08-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
2-Chlorophenol	3	NO	NO
2-Nitrophenol	4	NO	NO
Phenol	2	NO	NO
2,4-Dimethylphenol	3	NO	NO
2,4-Dichlorophenol	3	NO	NO
2,4,6-Trichlorophenol	3	NO	NO
4-Chloro-3-methylphenol	3	NO	NO
2,4-Dinitrophenol	40	NO	NO
2-Methyl-4,6-Dinitrophenol	20	NO	NO
Pentachlorophenol	4	NO	NO
4-Nitrophenol	3	NO	NO

*Laura Kuck*

Analyst

*M. J. Burt*

Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water

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Date Received: March 8, 1988  
 Date Reported: April 12, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park, S.E., Suite 590  
 Atlanta, Georgia 30329

ATTN: Mr. Jim Duncan

Lab Number:	880553	880554
Sample No.:	UF,2-2,SW1,ES	UF,1-W3,GW1,ES
Date Sampled:	3-7-88	3-6-88
Time Sampled:	1500	1530
Date Extracted:	3-11-88	3-11-88
Date Analyzed:	4-11-88	4-11-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	ND
N-Nitrosodimethylamine	25	ND	ND
Bis(2-chloro-n-propyl)ether	6	ND	ND
N-Nitrosodi-n-propyl amine	25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	ND	11
Bis(2-chloroethoxy)methane	5	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

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Date Received: March 8, 1988  
 Date Reported: April 12, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park, S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880553	880554
Sample Number:	UF,2-2,SW1,ES	UF,1-W3,GW1,ES
Date Sampled:	3-7-88	3-6-88
Time Sampled:	1500	1530
Date Extracted:	3-11-88	3-11-88
Date Analyzed:	4-11-88	4-11-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Libutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl ether	4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phthalate	3	ND	ND
Chrysene	3	ND	ND
4-Bromophenyl phenyl ether	2	ND	ND
Benzo(a)anthracene	8	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene	3	ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

Date Received: March 8, 1988  
Date Reported: April 12, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park, S.E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	880553	880554
Sample No.:	UF,2-2,SW1,ES	UF,1-W3,GW1,ES
Date Sampled:	3-7-88	3-6-88
Time Sampled:	1500	1530
Date Extracted:	3-11-88	3-11-88
Date Analyzed:	4-11-88	4-11-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits ug/L	ug/L	ug/L
Alpha-BHC	--*	ND	ND
Gamma-BHC	—*	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	--*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	--*	ND	ND
Endosulfan II	--*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	--*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

\* Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

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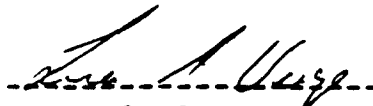
Date Received: March 8, 1988  
 Date Reported: April 12, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park, S.E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880553	880554
Sample No.:	UF,2-2,SW1,ES	UF,1-W3,GW1,ES
Date Sampled:	3-7-88	3-6-88
Time Sampled:	1500	1530
Date Extracted:	3-11-88	3-11-88
Date Analyzed:	4-11-88	4-11-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	ND	11
2,4-Dimethylphenol	3	ND	4
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophenol	20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

  
 Analyst

  
 Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

ENGINEERING SCIENCE  
 Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880536	880537
Sample No.:	UF, 2-W1, GW1, ES	UF, 1-W4, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	0915	1500
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	ND
N-Nitrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)ether	6	ND	ND
N-Nitrosodi-n-propyl amine	25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	ND	19
Bis(2-chloroethoxy)methane	5	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

page 2 of 4

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880536	880537
Sample Number:	UF, 2-W1, GW1, ES	UF, 1-W4, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	0915	1500
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl ether	4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phthalate	3	11	ND
Chrysene	3	ND	ND
4-Bromophenyl phenyl ether	2	ND	ND
Benzo(a)anthracene	8	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene	3	ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

page 3 of 4

Date Received: March 5, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S. E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	880536	880537
Sample No.:	UF, 2-W1, GW1, ES	UF, 1-W4, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	0915	1500
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection Limits	ANALYTICAL RESULTS	
	ug/L	ug/L	ug/L
Alpha-BHC	--*	ND	ND
Gamma-BHC	---	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	--*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	--*	ND	ND
Endosulfan II	--*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	--*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

\* Detection limits have not yet been determined for these compounds



Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880536	880537
Sample No.:	UF, 2-W1, GW1, ES	UF, 1-W4, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	0915	1500
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits ug/L	ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	ND	ND
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophenol	20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

*Laura Kuek*  
 -----  
 Analyst

*AWB*  
 -----  
 Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**ENGINEERING SCIENCE**  
**Priority Pollutant Analysis**  
**Base Neutrals - EPA 625**  
**Matrix: Water**

page 1 of 4

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880538	880539
Sample No.:	UF, 1-W5, GW1, ES	UF, 2-W2, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	1600	1130
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
1,3-Dichlorobenzene	2	ND	ND
1,4-Dichlorobenzene	2	ND	ND
Hexachloroethane	2	ND	ND
Bis(2-chloroethyl)ether	6	ND	ND
1,2-Dichlorobenzene	2	ND	ND
N-Nitrosodimethylamine	25	ND	ND
Bis(2-chloroisopropyl)ether	6	ND	ND
N-Nitrosodi-n-propyl amine	25	ND	ND
Hexachlorobutadiene	1	ND	ND
1,2,4-Trichlorobenzene	2	ND	ND
Nitrobenzene	2	ND	ND
Isophorone	2	ND	ND
Naphthalene	2	ND	ND
Bis(2-chloroethoxy)methane	5	ND	ND
2-Chloronaphthalene	2	ND	ND
Hexachlorocyclopentadiene	25	ND	ND
Acenaphthylene	4	ND	ND
Acenaphthene	2	ND	ND
Dimethyl phthalate	2	ND	ND
2,6-Dinitrotoluene	2	ND	ND
Fluorene	2	ND	ND
2,4-Dinitrotoluene	2	ND	ND
Diethyl phthalate	2	ND	ND
N-Nitrosodiphenylamine	2	ND	ND
Hexachlorobenzene	2	ND	ND

Priority Pollutant Analysis  
 Base Neutrals - EPA 625  
 Matrix: Water  
 (continued)

page 2 of 4

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No. : AT077

FOR: ES:Atlanta/Volk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880538	880539
Sample Number:	UF, 1-W5, GW1, ES	UF, 2-W2, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	1600	1130
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection Limit ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
Phenanthrene	5	ND	ND
Anthracene	2	ND	ND
Dibutyl phthalate	3	ND	ND
Fluoranthene	2	ND	ND
4-Chlorophenyl phenyl ether	4	ND	ND
Pyrene	2	ND	ND
Butyl Benzyl phthalate	3	ND	ND
Bis(2-ethylhexyl) phthalate	3	ND	ND
Chrysene	3	ND	ND
4-Bromophenyl phenyl ether	2	ND	ND
Benzo(a)anthracene	8	ND	ND
Di-n-octylphthalate	3	ND	ND
Benzo(b)fluoranthene	5	ND	ND
Benzo(k)fluoranthene	3	ND	ND
Benzidine	60	ND	ND
3,3'-Dichlorobenzidine	40	ND	ND
Benzo(a)pyrene	3	ND	ND
Indeno(1,2,3-cd)pyrene	4	ND	ND
Dibenzo(a,h)anthracene	3	ND	ND
Benzo(ghi)perylene	4	ND	ND

Priority Pollutant Analysis  
Pesticides and PCBs - EPA 625  
Matrix: Water

page 3 of 4

Date Received: March 5, 1988  
Date Reported: March 25, 1988

P.O. No.: .....  
Job No.: AT077

FOR: ES:Atlanta/Volk ANGB  
Address: 57 Executive Park S. E., Suite 590  
Atlanta, Georgia 30329  
ATTN: Mr. Jim Duncan

Lab Number:	880538	880539
Sample No.:	UF, 1-W5, GW1, ES	UF, 2-W2, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	1600	1130
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection	ANALYTICAL RESULTS	
	Limits ug/L	ug/L	ug/L
Alpha-BHC	--*	ND	ND
Gamma-BHC	—*	ND	ND
Beta-BHC	4	ND	ND
Heptachlor	2	ND	ND
Delta-BHC	3	ND	ND
Aldrin	2	ND	ND
Heptachlor epoxide	2	ND	ND
Endosulfan I	--*	ND	ND
Dieldrin	3	ND	ND
4,4'-DDE	6	ND	ND
Endrin	--*	ND	ND
Endosulfan II	--*	ND	ND
4,4'-DDD	3	ND	ND
4,4'-DDT	5	ND	ND
Endosulfan Sulfate	6	ND	ND
Endrin aldehyde	--*	ND	ND
Chlordane	40	ND	ND
Toxaphene	40	ND	ND
PCB-1016	40	ND	ND
PCB-1221	40	ND	ND
PCB-1232	40	ND	ND
PCB-1242	40	ND	ND
PCB-1248	40	ND	ND
PCB-1254	40	ND	ND
PCB-1260	40	ND	ND

\* Detection limits have not yet been determined for these compounds

Priority Pollutant Analysis  
 Acid Extractables -- EPA 625  
 Matrix: Water

Date Received: March 5, 1988  
 Date Reported: March 25, 1988

P.O. No.: .....  
 Job No.: AT077

FOR: ES: Atlanta/Uolk ANGB  
 Address: 57 Executive Park S. E., Suite 590  
 Atlanta, Georgia 30329  
 ATTN: Mr. Jim Duncan

Lab Number:	880538	880539
Sample No.:	UF, 1-W5, GW1, ES	UF, 2-W2, GW1, ES
Date Sampled:	3-04-88	3-04-88
Time Sampled:	1600	1130
Date Extracted:	3-07-88	3-07-88
Date Analyzed:	3-18-88	3-18-88

Compound	Detection Limits ug/L	ANALYTICAL RESULTS	
		ug/L	ug/L
2-Chlorophenol	3	ND	ND
2-Nitrophenol	4	ND	ND
Phenol	2	ND	ND
2,4-Dimethylphenol	3	ND	ND
2,4-Dichlorophenol	3	ND	ND
2,4,6-Trichlorophenol	3	ND	ND
4-Chloro-3-methylphenol	3	ND	ND
2,4-Dinitrophenol	40	ND	ND
2-Methyl-4,6-Dinitrophenol	20	ND	ND
Pentachlorophenol	4	ND	ND
4-Nitrophenol	3	ND	ND

*Laura Kuck*  
 Analyst


*DWB*  
 Approved By

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

**ANALYTICAL RESULTS  
FOR METALS**

ANALYSIS REPORT

WORK ORDER NUMBER: 467  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 01/27/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD AMGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD AMGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1, B-3, SS-3, 8.5' 88010186	VF1, B-21, SS-1, 1.0' 88010187	VF1, B-22, SS-1, 0.5' 88010188	VF1, B-4, SS-1, 0.5' 88010189	VF1, B-1, SS-1, 0.5' 88010190	VF1, B-1, SS-2, 3.5' 88010191
3050	NA	NA	NA	NA	NA	NA
PB-F	<0.5	1.6	85.0	62.05	5.7	0.8

ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-1,SS-3, 8.5' 88010192	VF1,B-2,SS-1, 0.5' 88010193	VF1,B-2,SS-2, 3.5' 88010194	VF1,B-2,SS-3, 8.5' 88010195	VF1,B-3,SS-1, 1.0' 88010196	VF1,B-3,SS-2, 3.5' 88010197
3050	NA	NA	NA	NA	NA	NA
PB-F	0.6	1.8	<0.5	<0.5	1.7	<0.5



ANALYSIS REPORT FOR WORK ORDER NUMBER 467

TASK: 2. UNITS: mg/KG

TEST COMPOUND	VF1,B-4,SS-2, 3.5' 88010198	VF1,B-4,SS-3, 8.5' 88010199
3050 PB-F	NA 3.9	NA 0.9

DETECTION LIMITS  
ENVIRONMENTAL QUALITY PARAMETERS  
SAMPLES NO.: 88010186-88010199

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
SW7421 PB-F,	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- E      Reported value is less than Reporting limit  
         but greater than the MDL.
- N      Spiked sample recovery not within control limits.
- S      Reported value was determined by the Method of  
         Standard Additions.
- \*      Duplicate analysis not within control limits.
- J      Sample value is corrected by the analyte  
         concentration found in the blank.
- W      Post digestion spike for Furnace AA analysis  
         out of control limits (85-115%), while sample  
         absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 474  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 01/29/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-26,SS-1, 0'	VF1,B-9,SS-2, 3.5'	VF1,B-9,SS-3, 8.5'	VF1,B-8,SS-1, 0'	VF1,B-8,SS-2, 3.5'	VF1,B-8,SS-3, 8.5'
	88010214	88010215	88010216	88010217	88010218	88010219
3050	NA	NA	NA	NA	NA	NA
PB-F	2.3	0.9	<0.5	11.05	0.5	<0.5

ANALYSIS REPORT FOR WORK ORDER NUMBER 474

TASK: 2, UNITS: mg/KG

	VF1,B-9,SS-1, 0'
TEST COMPOUND	88010220
-----	
3050	NA
PB-F	2.3

DETECTION LIMITS  
ENVIRONMENTAL QUALITY PARAMETERS  
SAMPLES NO.: 88010214-88010220

Parameter	Units	Detection Limits
SW7421 PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 489  
JOB NUMBER : Z80000000400  
WORK ORDER DATE : 02/10/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD AMGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD AMGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-10,SS-1, 0.5' 88020289	VF1,B-27,SS-1, 0.5' 88020290	VF1,B-10,SS-2, 3.5' 88020291	VF1,B-10,SS-3, 8.5' 88020292	VF1,B-11,SS-1, 1.0' 88020293	VF1,B-11,SS-2 3.5' 88020294
3050	NA	NA	NA	NA	NA	NA
PB-F	4.4	4.05	1.0	<0.5	1.8	0.6



ANALYSIS REPORT FOR WORK ORDER NUMBER 489

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-11,SS-3, 8.5' 88020295	VF1,B-12,SS-1 1.0' 88020296	VF1,B-12,SS-2, 3.5' 88020297	VF1,B-12,SS-3, 8.5' 88020298	VF1,B-13,SS-1, 1.5' 88020299	VF1,B-20,SS-1, 1.5' 88020300
3050	NA	NA	NA	NA	NA	NA
PB-F	0.9	2.2	1.5	0.7	0.8	2.4

DETECTION LIMITS  
ENVIRONMENTAL QUALITY PARAMETERS  
SAMPLES NO.: 88020289-88020300

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
SW7421 PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- E     Reported value is less than Reporting limit  
      but greater than the MDL.
- N     Spiked sample recovery not within control limits.
- S     Reported value was determined by the Method of  
      Standard Additions.
- \*     Duplicate analysis not within control limits.
- J     Sample value is corrected by the analyte  
      concentration found in the blank.
- W     Post digestion spike for Furnace AA analysis  
      out of control limits (85-115%), while sample  
      absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 500  
JOB NUMBER : Z80000000400  
WORK ORDER DATE : 02/11/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD AMGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD AMGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,8-14,SS-3, 8.5' 88020371	VF1,8-15,SS-1, 0.5' 88020372	VF1,8-15,SS-2, 3.5' 88020373	VF1,8-15,SS-3, 8.5' 88020374	VF1,8-13,SS-2, 3.5' 88020375	VF1,8-13,SS-3, 8.5' 88020376
3050	NA	NA	NA	NA	NA	NA
PB-F	0.6	1.7	<0.5	<0.5	0.6	<0.5

ANALYSIS REPORT FOR WORK ORDER NUMBER 500

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-14,SS-1, 1.0' 88020377	VF1,B-14,SS-2, 3.5' 88020378
3050	NA	NA
PB-F	7.1	1.0

ND - Not Detected

E-477

DETECTION LIMITS  
ENVIRONMENTAL QUALITY PARAMETERS  
SAMPLES NO.: 88020371-88020378

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
SW7421 PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B      Reported value is less than Reporting limit  
         but greater than the MDL.
- N      Spiked sample recovery not within control limits.
- S      Reported value was determined by the Method of  
         Standard Additions.
- \*      Duplicate analysis not within control limits.
- J      Sample value is corrected by the analyte  
         concentration found in the blank.
- W      Post digestion spike for Furnace AA analysis  
         out of control limits (85-115%), while sample  
         absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 472  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 01/28/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD AMGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD AMGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-7,SS-3, 8.5'	VF1,B-6,SS-2, 3.5'	VF1,B-6,SS-3, 8.5'	VF1,B-7,SS-1, 0'	VF1,B-7,SS-2, 3.5'	VF1,B-5,SS-1,0'
	88010204	88010205	88010206	88010207	88010208	88010209
3050	NA	NA	NA	NA	NA	NA
PB-F	<0.5	55.0	1.9	1.8	0.9	5.8



ANALYSIS REPORT FOR WORK ORDER NUMBER 472

TASK: 2, UNITS: mg/KG

TEST COMPOUND	VF1,B-5,SS-2, 3.5' 88010210	VF1,B-5,SS-3, 10.0' 88010211	VF1,B-6,SS-1, 0' 88010212
3050	NA	NA	NA
PB-F	1.2	<0.5	77.5

ND - Not Detected

DETECTION LIMITS  
ENVIRONMENTAL QUALITY PARAMETERS  
SAMPLES NO.: 88010204-88010212

<u>Parameter</u>	<u>Units</u>	<u>Detection Limits</u>
SW7421 PB-F	mg/KG	0.5

The method detection limits listed are based upon the EPA method listed. Dilution or other deviations from the normal procedures, required due to characteristics of a sample, will influence these values. These changes are described in the report narrative if applicable.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 534  
JOB NUMBER : Z80000000400  
WORK ORDER DATE : 03/08/88

APPROVED BY *Luella J. Minter*  
Lab Supervisor

REPORT DATA:  
5 ATLANTA/VOLK FIELD AMGB  
7 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD AMGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

NOF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

ASK: 2. UNITS: mg/L

EST COMPOUND	VF,2-W5,GW1,ES 88030551	VF,2-1,SW1,ES 88030552	VF,2-2,SW1,ES 88030553	VF,1-W3,GW1,ES 88030554	VF,10-W1,GW1,ES 88030555	VF,2-W3,GW1,ES 88030556
020				NA 0.005W	NA <.005W	
B-F						
010	NA	NA	NA			NA
020	NA	NA	NA			NA
G-A	<0.01M	<0.01M	<0.01M			<0.01M
S-F	<0.005	<0.005	<0.005			<0.005
E-A	<0.001	<0.001	<0.001			<0.001
D-W	<0.010	<0.010	<0.010			<0.010
R-A	<0.010	<0.010	<0.010			<0.010
U-A	<0.010	<0.010	0.018			<0.018
G-C	<.0002	<.0002	<.0002			<.0002
I-W	<0.010	<0.010	<0.010			<0.010
B-F	<0.005	<0.005	0.007			<.005W
B-A	<0.06	<0.06	<0.06			<0.06
E-F	<0.005	<0.005	<0.005			<0.005
L-A	<0.10	<0.10	0.12			<0.10
M-A	0.03	0.02	0.04			0.02

05/27/88

## ANALYSIS REPORT FOR WORK ORDER NUMBER 534

TASK: 2. UNITS: mg/L

TEST COMPOUND	VF.2-W4,GW1,ES	VF.10-W2,GW1,ES	VF.10-W3,GW1,ES	VF.10-W5,GW1,ES	VF.10-W4,GW1,ES	VF.12-W2,GW1,ES
	88030557	88030558	88030559	88030560	88030561	88030562
3020		NA	NA	NA	NA	
PB-F		0.0000	<.0050	0.0060	0.0060	
3010	NA					NA
3020	NA					NA
AG-A	<0.010					<0.010
AS-F	<0.005					<.0050
BE-W	0.0018					<0.001
CD-A	<0.010					<0.010
CR-A	0.018					<0.01
CU-A	0.018					<0.01
HG-C	<.0002					<.0002
NI-A	<0.010					<0.010
PB-F	<.0050					<0.005
SB-A	<0.06					<0.06
SE-F	<0.005					<0.005
TL-A	<0.10					<0.10
ZN-W	0.03					0.018

ES  
REPORTING LEVELS AND MDL'S FOR METALS  
SAMPLES NO.: 880305551-88030562

Metal	MDL (ES) mg/L	Reporting Limits mg/L
Aluminum	0.1	0.2
Antimony	0.1	0.1
Arsenic	0.005	0.005
Barium	0.01	0.2
Beryllium	0.001	0.005
Boron	0.1	0.1
Cadmium	0.01	0.01
Calcium	0.1	5.0
Chromium	0.01	0.05
Cobalt	0.01	0.05
Copper	0.01	0.025
Iron	0.01	0.1
Lead	0.005	0.005
Magnesium	0.1	5.0
Manganese	0.01	0.015
Mercury	0.0002	0.0002
Molybdenum	0.1	0.1
Nickel	0.01	0.04
Potassium	1.0	5
Selenium	0.005	0.005
Silica	0.1	0.1
Silver	0.01	0.05
Sodium	0.1	5.0
Thallium	0.1	0.1
Vanadium	0.1	0.1
Zinc	0.01	0.02

LEGEND FOR RESULT QUALIFIERS

- B     Reported value is less than Reporting limit  
      but greater than the MDL.
- N     Spiked sample recovery not within control limits.
- S     Reported value was determined by the Method of  
      Standard Additions.
- \*     Duplicate analysis not within control limits.
- J     Sample value is corrected by the analyte  
      concentration found in the blank.
- W     Post digestion spike for Furnace AA analysis  
      out of control limits (85-115%), while sample  
      absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

ORDER NUMBER: 530  
NUMBER : ZB0000000400  
ORDER DATE : 03/05/88

APPROVED BY *Jim W. G. Mitchell*  
Lab Supervisor

PORT DATA:  
ATLANTA/VOLK FIELD ANGB  
EXECUTIVE PARK STE. 590  
ANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

REPORT COPIES: 1

TRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

PK: 2, UNITS: mg/L

TEST COMPOUND	VF,2-W1,GW1,ES 88030536	VF,1-W4,GW1,ES 88030537	VF,1-W5,GW1,ES 88030538	VF,2-W2,GW1,ES 88030539	VF,1-W1,GW1,ES 88030540	VF,3/6-W1,GW1, ES 88030541
TO		NA	NA		NA	NA
-F		0.006	0.020		0.010	<.005M
LO	NA			NA		
LO	NA			NA		
-A	<0.01M			0.01MB		
-F	<0.005			0.005		
-A	<0.001			0.001B		
-A	<0.010			<0.010		
-A	<0.010			0.03B		
-A	0.02B			0.030		
-C	<.0002			<.0002		
-A	<0.01			0.02B		
-F	0.010			0.009		
-A	<0.06			<0.06		
-F	<0.005			<0.005		
-A	<0.10			<0.10		
-A	0.04			0.05		



ES  
REPORTING LEVELS AND MDL'S FOR METALS  
SAMPLES NO.: 88030536-88030541

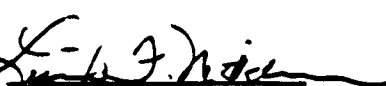
Metal	MDL (ES) mg/L	Reporting Limits mg/L
Al	0.1	0.2
Sb	0.1	0.1
Ba	0.01	0.2
Be	0.001	0.005
B	0.1	0.1
Cd	0.01	0.01
Ca	0.1	5.0
Cr	0.01	0.05
Co	0.01	0.05
Cu	0.01	0.025
Fe	0.01	0.1
Pb	0.005	0.005
Mg	0.1	5.0
Mn	0.01	0.015
Mo	0.1	0.1
Ni	0.01	0.04
K	1.0	5.0
SiO2	0.1	0.1
Ag	0.01	0.05
Na	0.1	5.0
Tl	0.1	0.1
V	0.1	0.1
Zn	0.01	0.02
As	0.005	0.005
Se	0.005	0.005
Hg	0.0002	0.0002

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 536  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 03/09/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD AMGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD AMGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/L

TEST COMPOUND	VF,12-W3,C01,ES	VF,1-W2,C01,ES	VF,ET-1,C01,ES	VF,ET-2,C01,ES	VF,ET-3,C01,ES
3020	NO	NO	NO	NO	NO
PB-F	<0.005	0.005	0.033	0.025	0.005

ES  
 REPORTING LEVELS AND MDL'S FOR METALS  
 SAMPLES NO.: 88030565-88030569

Metal	MDL (ES) mg/L	Reporting Limits mg/L
Al	0.1	0.2
Sb	0.1	0.1
Ba	0.01	0.2
Be	0.001	0.005
B	0.1	0.1
Cd	0.01	0.01
Ca	0.1	5.0
Cr	0.01	0.05
Co	0.01	0.05
Cu	0.01	0.025
Fe	0.01	0.1
Pb	0.005	0.005
Mg	0.1	5.0
Mn	0.01	0.015
Mo	0.1	0.1
Ni	0.01	0.04
K	1.0	5.0
SiO2	0.1	0.1
Ag	0.01	0.05
Na	0.1	5.0
Tl	0.1	0.1
V	0.1	0.1
Zn	0.01	0.02
As	0.005	0.005
Se	0.005	0.005
Hg	0.0002	0.0002

LEGEND FOR RESULT QUALIFIERS

- B      Reported value is less than Reporting limit  
         but greater than the MDL.
- N      Spiked sample recovery not within control limits.
- S      Reported value was determined by the Method of  
         Standard Additions.
- \*      Duplicate analysis not within control limits.
- J      Sample value is corrected by the analyte  
         concentration found in the blank.
- W      Post digestion spike for Furnace AA analysis  
         out of control limits (85-115%), while sample  
         absorbance is less than 50% of spike absorbance.

ANALYSIS REPORT

WORK ORDER NUMBER: 538  
JOB NUMBER : ZB0000000400  
WORK ORDER DATE : 03/10/88

APPROVED BY   
Lab Supervisor

REPORT DATA:  
ES ATLANTA/VOLK FIELD ANGB  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329  
JIMMY DUNCAN

CLIENT DATA:  
ES ATLANTA/VOLK FIELD ANGB ( 85)  
57 EXECUTIVE PARK STE. 590  
ATLANTA, GA 30329

# OF REPORT COPIES: 1

CONTRACT / PO # : AT077  
CONTACT : JIMMY DUNCAN  
(404)-325-0770

TASK: 2, UNITS: mg/L

	VF,ET-5,GW1,ES	VF,ET-4,GW1,ES	VF,13-W1,GW1,ES	VF,ET-7,GW1,ES	VF,ET-6,GW1,ES
TEST COMPOUND	88030572	88030573	88030574	88030575	88030576
3020	NA	NA		NA	NA
PB-F	0.270	0.053		0.007	0.009
3010			NA		
3020			NA		
AG-A			<0.01M		
AS-F			<.005M		
BE-A			<0.001		
CD-A			<0.010		
CR-A			<0.010		
CU-A			0.01B		
HG-C			<.0002		
NI-A			<0.010		
PB-F			<0.005		
SB-A			<0.06		
SE-F			<0.005		
TL-A			<0.10		
ZN-A			0.01B		

LEGEND FOR RESULT QUALIFIERS

- B      Reported value is less than Reporting limit  
but greater than the MDL.
- N      Spiked sample recovery not within control limits.
- S      Reported value was determined by the Method of  
Standard Additions.
- \*      Duplicate analysis not within control limits.
- J      Sample value is corrected by the analyte  
concentration found in the blank.
- W      Post digestion spike for Furnace AA analysis  
out of control limits (85-115%), while sample  
absorbance is less than 50% of spike absorbance.

ES  
 REPORTING LEVELS AND MDL'S FOR METALS  
 SAMPLES NO.: 88030572-88030576

Metal	MDL (ES) mg/L	Reporting Limits mg/L
Aluminum	0.1	0.2
Antimony	0.1	0.1
Arsenic	0.005	0.005
Barium	0.01	0.2
Beryllium	0.001	0.005
Boron	0.1	0.1
Cadmium	0.01	0.01
Calcium	0.1	5.0
Chromium	0.01	0.05
Cobalt	0.01	0.05
Copper	0.01	0.025
Iron	0.01	0.1
Lead	0.005	0.005
Magnesium	0.1	5.0
Manganese	0.01	0.015
Mercury	0.0002	0.0002
Molybdenum	0.1	0.1
Nickel	0.01	0.04
Potassium	1.0	5
Selenium	0.005	0.005
Silica	0.1	0.1
Silver	0.01	0.05
Sodium	0.1	5.0
Thallium	0.1	0.1
Vanadium	0.1	0.1
Zinc	0.01	0.02



**SAMPLE PREPARATION DATA**



**ENGINEERING-SCIENCE, INC.**

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park S., NE #590  
Atlanta, Ga. 30329  
Project: VOLK ANGB

The following results were reported for % moisture on Volk soil samples:

Sample Preparation Data

Laboratory Sample No.	% Moisture	Laboratory Sample No.	% Moisture
88010186	3	88010218	3
88010187	4	88010219	3
88010188	3	88010220	4
88010189	6	88020289	5
88010190	3	88020290	5
88010191	2	88020291	4
88010192	2	88020292	5
88010193	4	88020293	5
88010194	4	88020294	3
88010195	3	88020295	3
88010196	4	88020296	1
88010197	3	88020297	1
88010198	4	88020298	4
88010199	2	88020299	1
88010204	8	88020300	1
88010205	5	88020371	1
88010206	2	88020372	4
88010207	5	88020373	3
88010208	2	88020374	3
88010209	4	88020375	3
88010210	4	88020376	4
88010211	3	88020377	13
88010212	5	88020378	3

Laboratory Sample No.	% Moisture	Laboratory Sample No.	% Moisture
88010214	4	88020383	14
88010215	3	88020384	6
88010216	6	88020385	5
88010217	9		

Detection limit = 1%

These numbers should be used to calculate dry weight values for your samples.

  
Inorganic Laboratory Supervisor



**ENGINEERING-SCIENCE, INC.**

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Revised Report 6-23-88

Job No.: AT077  
Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-27-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010186	418.1	1-26-88	1405	1-30-88	2-17-88	
88010186	8010	1-26-88	1405		1-28-88	
88010186	8020	1-26-88	1405		1-28-88	
88010186	PCB	1-26-88	1405	1-28-88	2-29-88	
88010187	418.1	1-26-88	1210	1-30-88	2-17-88	
88010187	8010	1-26-88	1210		1-28-88	
88010187	8020	1-26-88	1210		1-28-88	
88010187	PCB	1-26-88	1210	1-28-88	2-22-88	
88010188	418.1	1-26-88	1430	1-30-88	2-17-88	
88010188	8010	1-26-88	1430		1-28-88	2-03-88
88010188	8020	1-26-88	1430		2-09-88	2-09-88
88010188	PCB	1-26-88	1430	1-28-88	2-22-88	
88010189	418.1	1-26-88	1430	1-30-88	2-17-88	
88010189	8010	1-26-88	1430		2-03-88	2-10-88
88010189	8020	1-26-88	1430		2-01-88	2-01-88
88010189	PCB	1-26-88	1430	1-28-88	2-22-88	
88010190	418.1	1-26-88	0840	1-30-88	2-17-88	
88010190	8010	1-26-88	0840		1-28-88	2-03-88
88010190	8020	1-26-88	0840		2-01-88	2-01-88
88010190	PCB	1-26-88	0840	1-28-88	2-22-88	
88010191	418.1	1-26-88	0910	1-30-88	2-17-88	
88010191	8010	1-26-88	0910		2-03-88	1-28-88
88010191	8020	1-26-88	0910		1-29-88	1-29-88
88010191	PCB	1-26-88	0910	1-28-88	2-22-88	

## Revised Report 6-23-88

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88010192	418.1	1-26-88	0940	1-30-88	2-17-88	
88010192	8010	1-26-88	0940		1-28-88	2-03-88
88010192	8020	1-26-88	0940		2-01-88	2-01-88
88010192	PCB	1-26-88	0940	1-28-88	2-22-88	
88010193	418.1	1-26-88	1040	1-30-88	2-17-88	
88010193	8010	1-26-88	1040		2-09-88	
88010193	8020	1-26-88	1040		2-01-88	
88010193	PCB	1-26-88	1040	1-28-88	2-22-88	
88010194	418.1	1-26-88	1110	1-30-88	2-17-88	
88010194	8010	1-26-88	1110		2-07-88	
88010194	8020	1-26-88	1110		2-09-88	
88010194	PCB	1-26-88	1110	1-28-88	2-22-88	
88010195	418.1	1-26-88	1145	1-30-88	2-17-88	
88010195	8010	1-26-88	1145		2-07-88	
88010195	8020	1-26-88	1145		2-07-88	
88010195	PCB	1-26-88	1145	1-28-88	2-22-88	
88010196	418.1	1-26-88	1210	1-30-88	2-17-88	
88010196	8010	1-26-88	1210		2-07-88	
88010196	8020	1-26-88	1210		2-09-88	
88010196	PCB	1-26-88	1210	1-28-88	2-29-88	
88010197	418.1	1-26-88	1250	1-30-88	2-17-88	
88010197	8010	1-26-88	1250		2-07-88	
88010197	8020	1-26-88	1250		2-07-88	
88010197	PCB	1-26-88	1250	1-28-88	2-22-88	
88010198	418.1	1-26-88	1530	1-30-88	2-17-88	
88010198	8010	1-26-88	1530		2-09-88	
88010198	8020	1-26-88	1530		2-09-88	
88010198	PCB	1-26-88	1530	1-28-88	2-22-88	
88010199	418.1	1-26-88	1545	1-30-88	2-17-88	
88010199	8010	1-26-88	1545		2-05-88	
88010199	8020	1-26-88	1545		2-09-88	2-05-88
88010199	PCB	1-26-88	1545	1-28-88	2-22-88	

  
 Laboratory Supervisor

\* If applicable

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Job No.: AT077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-27-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010186	SW7421	1-26-88	1405		5-10-88	
88010187	SW7421	1-26-88	1210		5-10-88	
88010188	SW7421	1-26-88	1430		5-10-88	
88010189	SW7421	1-26-88	1430		5-12-88	
88010190	SW7421	1-26-88	0840		5-10-88	
88010191	SW7421	1-26-88	0910		5-10-88	
88010192	SW7421	1-26-88	0940		5-10-88	
88010193	SW7421	1-26-88	1040		5-10-88	
88010194	SW7421	1-26-88	1110		5-10-88	
88010195	SW7421	1-26-88	1145		5-10-88	
88010196	SW7421	1-26-88	1210		5-11-88	
88010197	SW7421	1-26-88	1250		5-11-88	
88010198	SW7421	1-26-88	1530		5-11-88	
88010199	SW7421	1-26-88	1545		5-11-88	

\* If applicable



Job No.: AT077  
 Client: ES Atlanta  
 Attention: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329  
 Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-28-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010204	418.1	1-27-88	1600	1-31-88	2-17-88	
88010204	8010	1-27-88	1600		2-04-88	
88010204	8020	1-27-88	1600		2-09-88	
88010204	PCB	1-27-88	1600	1-29-88	2-23-88	
88010205	418.1	1-27-88	1310	1-31-88	2-17-88	
88010205	8010	1-27-88	1310		2-04-88	2-10-88
88010205	8020	1-27-88	1310		2-10-88	2-04-88
88010205	PCB	1-27-88	1310	1-29-88	2-23-88	
88010206	418.1	1-27-88	1335	1-31-88	2-17-88	
88010206	8010	1-27-88	1335		2-04-88	2-10-88
88010206	8020	1-27-88	1335		2-10-88	2-04-88
88010206	PCB	1-27-88	1335	1-29-88	2-23-88	
88010207	418.1	1-27-88	1500	1-31-88	2-17-88	
88010207	8010	1-27-88	1500		2-05-88	
88010207	8020	1-27-88	1500		2-09-88	
88010207	PCB	1-27-88	1500	1-29-88	2-23-88	
88010208	418.1	1-27-88	1530	1-31-88	2-17-88	
88010208	8010	1-27-88	1530		2-05-88	
88010208	8020	1-27-88	1530		2-09-88	
88010208	PCB	1-27-88	1530	1-29-88	2-23-88	
88010209	418.1	1-27-88	1030	1-31-88	2-17-88	
88010209	8010	1-27-88	1030		2-05-88	
88010209	8020	1-27-88	1030		2-10-88	
88010209	PCB	1-27-88	1030	1-29-88	2-23-88	

# ES

## ENGINEERING-SCIENCE, INC.

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010210	418.1	1-27-88	1130	1-31-88	2-17-88	
88010210	8010	1-27-88	1130		2-05-88	
88010210	8020	1-27-88	1130		2-10-88	
88010210	PCB	1-27-88	1130	1-29-88	2-23-88	
88010211	418.1	1-27-88	1205	1-31-88	2-17-88	
88010211	8010	1-27-88	1205		2-05-88	
88010211	8020	1-27-88	1205		2-10-88	2-10-88
88010211	PCB	1-27-88	1205	1-29-88	2-23-88	
88010212	418.1	1-27-88	1240	1-31-88	2-17-88	
88010212	8010	1-27-88	1240		2-05-88	
88010212	8020	1-27-88	1240		2-10-88	2-10-88
88010212	PCB	1-27-88	1240	1-29-88	2-23-88	

  
\_\_\_\_\_  
Laboratory Supervisor

\* If applicable



ENGINEERING-SCIENCE, INC.

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-28-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010204	SW7421	1-27-88	1600		5-11-88	
88010205	SW7421	1-27-88	1310		5-11-88	
88010206	SW7421	1-27-88	1335		5-11-88	
88010207	SW7421	1-27-88	1500		5-11-88	
88010208	SW7421	1-27-88	1530		5-11-88	
88010209	SW7421	1-27-88	1030		5-11-88	
88010210	SW7421	1-27-88	1130		5-11-88	
88010211	SW7421	1-27-88	1205		5-11-88	
88010212	SW7421	1-27-88	1240		5-11-88	

\* If applicable



**ENGINEERING-SCIENCE, INC.**

RESEARCH AND DEVELOPMENT  
LABORATORY  
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BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-29-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010214	418.1	1-28-88	1320	2-03-88	2-17-88	
88010214	8010	1-28-88	1320		2-11-88	
88010214	8020	1-28-88	1320		2-11-88	
88010214	PCB	1-28-88	1320	2-02-88	2-23-88	
88010215	418.1	1-28-88	1350	2-03-88	2-17-88	
88010215	8010	1-28-88	1350		2-11-88	
88010215	8020	1-28-88	1350		2-11-88	
88010215	PCB	1-28-88	1350	2-02-88	2-23-88	
88010216	418.1	1-28-88	1415	2-03-88	2-17-88	
88010216	8010	1-28-88	1415		2-10-88	
88010216	8020	1-28-88	1415		2-11-88	
88010216	PCB	1-28-88	1415	2-02-88	2-23-88	
88010217	418.1	1-28-88	1045	2-03-88	2-17-88	
88010217	8010	1-28-88	1045		2-11-88	
88010217	8020	1-28-88	1045		2-11-88	
88010217	PCB	1-28-88	1045	2-02-88	2-23-88	
88010218	418.1	1-28-88	1125	2-03-88	2-17-88	
88010218	8010	1-28-88	1125		2-11-88	
88010218	8020	1-28-88	1125		2-11-88	
88010218	PCB	1-28-88	1125	2-02-88	2-23-88	
88010219	418.1	1-28-88	1145	2-03-88	2-17-88	
88010219	8010	1-28-88	1145		2-11-88	
88010219	8020	1-28-88	1145		2-11-88	
88010219	PCB	1-28-88	1145	2-02-88	2-23-88	

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88010220	418.1	1-28-88	1320	2-03-88	2-17-88	
88010220	8010	1-28-88	1320		2-11-88	
88010220	8020	1-28-88	1320		2-11-88	
88010220	PCB	1-28-88	1320	2-02-88	2-23-88	

  
\_\_\_\_\_  
Laboratory Supervisor

\* If applicable

Job No.: AT077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 1-29-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88010214	SW7421	1-28-88	1320		5-11-88	
88010215	SW7421	1-28-88	1350		5-11-88	
88010216	SW7421	1-28-88	1415		5-11-88	
88010217	SW7421	1-28-88	1045		5-12-88	
88010218	SW7421	1-28-88	1125		5-11-88	
88010219	SW7421	1-28-88	1145		5-11-88	
88010220	SW7421	1-28-88	1320		5-11-88	

\* If applicable

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by  
 this laboratory on 2-10-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88020289	418.1	2-09-88	1015	2-19-88	2-27-88	
88020289	8010	2-09-88	1015		2-16-88	
88020289	8020	2-09-88	1015		2-17-88	
88020289	PCB	2-09-88	1015	2-16-88	2-27-88	
88020290	418.1	2-09-88	1015	2-19-88	2-27-88	
88020290	8010	2-09-88	1015		2-17-88	
88020290	8020	2-09-88	1015		2-17-88	
88020290	PCB	2-09-88	1015	2-16-88	2-27-88	
88020291	418.1	2-09-88	1045	2-19-88	2-27-88	
88020291	8010	2-09-88	1045		2-16-88	
88020291	8020	2-09-88	1045		2-16-88	
88020291	PCB	2-09-88	1045	2-16-88	2-27-88	
88020292	418.1	2-09-88	1125	2-19-88	2-27-88	
88020292	8010	2-09-88	1125		2-19-88	
88020292	8020	2-09-88	1125		2-19-88	
88020292	PCB	2-09-88	1125	2-16-88	2-27-88	
88020293	418.1	2-09-88	1300	2-19-88	2-27-88	
88020293	8010	2-09-88	1300		2-16-88	
88020293	8020	2-09-88	1300		2-16-88	
88020293	PCB	2-09-88	1300	2-16-88	2-27-88	
88020294	418.1	2-09-88	1320	2-19-88	2-27-88	
88020294	8010	2-09-88	1320		2-17-88	
88020294	8020	2-09-88	1320		2-17-88	
88020294	PCB	2-09-88	1320	2-16-88	2-27-88	

# ES

## ENGINEERING-SCIENCE, INC.

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88020295	418.1	2-09-88	1340	2-19-88	2-27-88	
88020295	8010	2-09-88	1340		2-23-88	2-19-88
88020295	8020	2-09-88	1340		2-19-88	2-17-88
88020295	PCB	2-09-88	1340	2-16-88	2-27-88	
88020296	418.1	2-09-88	1400	2-19-88	2-27-88	
88020296	8010	2-09-88	1400		2-17-88	
88020296	8020	2-09-88	1400		2-17-88	
88020296	PCB	2-09-88	1400	2-16-88	2-27-88	
88020297	418.1	2-09-88	1500	2-19-88	2-27-88	
88020297	8010	2-09-88	1500		2-17-88	
88020297	8020	2-09-88	1500		2-17-88	
88020297	PCB	2-09-88	1500	2-16-88	2-27-88	
88020298	418.1	2-09-88	1540	2-19-88	2-27-88	
88020298	8010	2-09-88	1540		2-17-88	
88020298	8020	2-09-88	1540		2-17-88	
88020298	PCB	2-09-88	1540	2-16-88	2-27-88	
88020299	418.1	2-09-88	1600	2-20-88	2-27-88	
88020299	8010	2-09-88	1600		2-17-88	
88020299	8020	2-09-88	1600		2-17-88	
88020299	PCB	2-09-88	1600	2-16-88	2-27-88	
88020300	418.1	2-09-88	1600	2-20-88	2-27-88	
88020300	8010	2-09-88	1600		2-17-88	
88020300	8020	2-09-88	1600		2-17-88	
88020300	PCB	2-09-88	1600	2-16-88	2-27-88	

  
\_\_\_\_\_  
Laboratory Supervisor

\* If applicable





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RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-10-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88020289	SW7421	2-09-88	1015		5-11-88	
88020290	SW7421	2-09-88	1015		5-12-88	
88020291	SW7421	2-09-88	1045		5-11-88	
88020292	SW7421	2-09-88	1125		5-11-88	
88020293	SW7421	2-09-88	1300		5-11-88	
88020294	SW7421	2-09-88	1320		5-11-88	
88020295	SW7421	2-09-88	1340		5-11-88	
88020296	SW7421	2-09-88	1400		5-11-88	
88020297	SW7421	2-09-88	1500		5-11-88	
88020298	SW7421	2-09-88	1540		5-11-88	
88020299	SW7421	2-09-88	1600		5-11-88	
88020300	SW7421	2-09-88	1600		5-11-88	

\* If applicable



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RESEARCH AND DEVELOPMENT  
LABORATORY  
800 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077

Client: ES Atlanta

Attention: Jimmy Duncan

Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-11-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88020371	418.1	2-10-88	1330	2-20-88	2-27-88	
88020371	8010	2-10-88	1330		2-17-88	
88020371	8020	2-10-88	1330		2-17-88	
88020371	PCB	2-10-88	1330	2-23-88	2-27-88	
88020372	418.1	2-10-88	1350	2-20-88	2-27-88	
88020372	8010	2-10-88	1350		2-17-88	
88020372	8020	2-10-88	1350		2-17-88	
88020372	PCB	2-10-88	1350	2-23-88	2-27-88	
88020373	418.1	2-10-88	1500	2-20-88	2-28-88	
88020373	8010	2-10-88	1500		2-17-88	
88020373	8020	2-10-88	1500		2-17-88	
88020373	PCB	2-10-88	1500	2-23-88	2-27-88	
88020374	418.1	2-10-88	1510	2-20-88	2-28-88	
88020374	8010	2-10-88	1510		2-18-88	
88020374	8020	2-10-88	1510		2-18-88	
88020374	PCB	2-10-88	1510	2-23-88	2-27-88	
88020375	418.1	2-10-88	1000	2-20-88	2-28-88	
88020375	8010	2-10-88	1000		2-18-88	
88020375	8020	2-10-88	1000		2-18-88	
88020375	PCB	2-10-88	1000	2-23-88	2-27-88	
88020376	418.1	2-10-88	1015	2-20-88	2-28-88	
88020376	8010	2-10-88	1015		2-19-88	
88020376	8020	2-10-88	1015		2-19-88	
88020376	PCB	2-10-88	1015	2-23-88	2-27-88	

178.12.10

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ENGINEERING-SCIENCE, INC.

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88020377	418.1	2-10-88	1100	2-20-88	2-28-88	
88020377	8010	2-10-88	1100		2-19-88	
88020377	8020	2-10-88	1100		2-19-88	
88020377	PCB	2-10-88	1100	2-23-88	2-27-88	
88020378	418.1	2-10-88	1230	2-20-88	2-28-88	
88020378	8010	2-10-88	1230		2-19-88	
88020378	8020	2-10-88	1230		2-19-88	
88020378	PCB	2-10-88	1230	2-23-88	2-27-88	

  
\_\_\_\_\_  
Laboratory Supervisor

\* If applicable



ENGINEERING-SCIENCE, INC.

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the soil samples received by this laboratory on 2-11-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88020371	SW7421	2-10-88	1330		5-11-88	
88020372	SW7421	2-10-88	1350		5-11-88	
88020373	SW7421	2-10-88	1500		5-11-88	
88020374	SW7421	2-10-88	1510		5-11-88	
88020375	SW7421	2-10-88	1000		5-11-88	
88020376	SW7421	2-10-88	1015		5-11-88	
88020377	SW7421	2-10-88	1100		5-11-88	
88020378	SW7421	2-10-88	1230		5-11-88	

\* If applicable



ENGINEERING-SCIENCE, INC.

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Job No.: AT077

Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-10-88.

Sample Preparation Data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030572	239.2	3-09-88	1130		5-06-88	
88030573	239.2	3-09-88	1030		5-06-88	
88030574	PPM	3-09-88	0800		5-05-88	
88030575	239.2	3-09-88	0900		5-06-88	
88030576	239.2	3-09-88	0930		5-06-88	

\* If applicable



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LABORATORY  
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(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the water samples received  
by this laboratory on 3-05-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88030536	418.1	3-04-88	0915	3-10-88	3-18-88	
88030536	TDS	3-04-88	0915		3-10-88	
88030536	601	3-04-88	0915		3-15-88	
88030536	608	3-04-88	0915	3-08-88	3-12-88	
88030536	8020	3-04-88	0915		3-15-88	
88030537	418.1	3-04-88	1500	3-10-88	3-18-88	
88030537	TDS	3-04-88	1500		3-10-88	
88030537	601	3-04-88	1500		3-18-88	
88030537	8020	3-04-88	1500		3-18-88	3-18-88
88030537	PCB	3-04-88	1500	3-08-88	3-23-88	
88030538	418.1	3-04-88	1600	3-10-88	3-18-88	
88030538	TDS	3-04-88	1600		3-10-88	
88030538	601	3-04-88	1600		3-15-88	
88030538	8020	3-04-88	1600		3-15-88	3-12-88
88030538	PCB	3-04-88	1600	3-08-88	3-23-88	
88030539	418.1	3-04-88	1130	3-15-88	3-18-88	
88030539	TDS	3-04-88	1130		3-10-88	
88030539	601	3-04-88	1130		3-15-88	
88030539	608	3-04-88	1130	3-08-88	3-18-88	
88030539	8020	3-04-88	1130		3-15-88	
88030540	418.1	3-04-88	1545	3-15-88	3-18-88	
88030540	TDS	3-04-88	1545		3-10-88	
88030540	601	3-04-88	1545		3-15-88	
88030540	8020	3-04-88	1545		3-15-88	3-11-88
88030540	PCB	3-04-88	1545	3-08-88	3-23-88	

178.12.4

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88030541	418.1	3-04-88	1400	3-15-88	3-18-88	
88030541	601	3-04-88	1400		3-17-88	
88030541	8020	3-04-88	1400		3-17-88	3-12-88
88030542	601	3-04-88	0800		3-15-88	
88030542	8020	3-04-88	0800		3-15-88	

  
\_\_\_\_\_  
Laboratory Supervisor

\* If applicable



ENGINEERING-SCIENCE, INC.

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: At077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-05-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88030536	PPM	3-04-88	0915			5-04-88
88030537	239.2	3-04-88	1500			5-05-88
88030538	239.2	3-04-88	1600			5-05-88
88030539	PPM	3-04-88	1130			5-04-88
88030540	239.2	3-04-88	1545			5-05-88
88030541	239.2	3-04-88	1400			5-05-88

\* If applicable



**ENGINEERING-SCIENCE, INC.**600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 548-7970REVISED REPORT  
JUNE 10, 1988

Job No.: AT077

Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-08-88.

Sample Preparation Data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030551	418.1	3-06-88	1330	3-15-88	3-18-88	
88030551	TDS	3-06-88	1330		3-10-88	
88030551	601	3-06-88	1330		3-15-88	
88030551	608	3-06-88	1330	3-10-88	3-22-88	
88030551	8020	3-06-88	1330		3-15-88	
88030552	418.1	3-07-88	1430	3-15-88	3-18-88	
88030552	TDS	3-07-88	1430		3-10-88	
88030552	601	3-07-88	1430		3-16-88	
88030552	608	3-07-88	1430	3-10-88	3-22-88	
88030552	8020	3-07-88	1430		3-16-88	
88030553	418.1	3-07-88	1500	3-15-88	3-18-88	
88030553	TDS	3-07-88	1500		3-10-88	
88030553	601	3-07-88	1500		3-16-88	
88030553	608	3-07-88	1500	3-10-88	3-22-88	
88030553	8020	3-07-88	1500		3-16-88	
88030554	418.1	3-06-88	1530	3-15-88	3-18-88	
88030554	TDS	3-06-88	1530		3-10-88	
88030554	601	3-06-88	1530		3-17-88	3-18-88
88030554	PCB	3-06-88	1530	3-10-88	3-23-88	
88030554	8020	3-06-88	1530		3-17-88	3-18-88
88030555	418.1	3-07-88	0845	3-15-88	3-18-88	
88030555	601	3-07-88	0845		3-13-88	
88030555	8020	3-07-88	0845		3-18-88	
88030556	418.1	3-07-88	1345	3-15-88	3-18-88	
88030556	TDS	3-07-88	1345		3-10-88	
88030556	601	3-07-88	1345		3-18-88	
88030556	608	3-07-88	1345	3-10-88	3-22-88	
88030556	8020	3-07-88	1345		3-18-88	

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RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88030557	418.1	3-06-88	1400	3-15-88	3-18-88	
88030557	TDS	3-06-88	1400		3-10-88	
88030557	601	3-06-88	1400		3-16-88	
88030557	608	3-06-88	1400	3-10-88	3-22-88	
88030557	8020	3-06-88	1400		3-16-88	
88030558	418.1	3-07-88	0930	3-16-88	3-19-88	
88030558	601	3-07-88	0930		3-16-88	
88030558	8020	3-07-88	0930		3-16-88	
88030559	418.1	3-07-88	1015	3-16-88	3-19-88	
88030559	601	3-07-88	1015		3-16-88	
88030559	8020	3-07-88	1015		3-16-88	
88030560	418.1	3-07-88	1100	3-16-88	3-19-88	
88030560	601	3-07-88	1100		3-18-88	
88030560	8020	3-07-88	1100		3-18-88	3-18-88
88030561	418.1	3-07-88	1045	3-16-88	3-19-88	
88030561	601	3-07-88	1045		3-18-88	
88030561	8020	3-07-88	1045		3-18-88	3-18-88
88030562	418.1	3-06-88	1100	3-16-88	3-19-88	
88030562	TDS	3-06-88	1100		3-10-88	
88030562	601	3-06-88	1100		3-16-88	
88030562	608	3-06-88	1100	3-10-88	3-22-88	
88030562	8020	3-06-88	1100		3-16-88	
88030563	601	3-07-88	1530		3-17-88	
88030563	8020	3-07-88	1530		3-17-88	

  
\_\_\_\_\_  
Laboratory Supervisor

\* If applicable



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RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077

Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-08-88.

Sample Preparation Data

Laboratory Sample No.	Test	Date collected	Time collected	Date* extracted	Date analyzed	Date* 2nd col.
88030551	PPM	3-06-88	1330		5-05-88	
88030552	PPM	3-07-88	1430		5-05-88	
88030553	PPM	3-07-88	1500		5-05-88	
88030554	239.2	3-06-88	1530		5-04-88	
88030555	239.2	3-07-88	0845		5-04-88	
88030556	PPM	3-07-88	1345		5-05-88	
88030557	PPM	3-06-88	1400		5-05-88	
88030558	239.2	3-07-88	0930		5-04-88	
88030559	239.2	3-07-88	1015		5-04-88	
88030560	239.2	3-07-88	1100		5-04-88	
88030561	239.2	3-07-88	1045		5-04-88	
88030562	PPM	3-06-88	1100		5-05-88	

\* If applicable

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RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
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Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-09-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88030565	418.1	3-08-88	0800	3-16-88	3-19-88	
88030565	TDS	3-08-88	0800		3-15-88	
88030565	601	3-08-88	0800		3-22-88	
88030565	8020	3-08-88	0800		3-22-88	
88030565	PCB	3-08-88	0800	3-10-88	3-23-88	
88030566	418.1	3-08-88	0930	3-16-88	3-19-88	
88030566	TDS	3-08-88	0930		3-15-88	
88030566	601	3-08-88	0930		3-18-88	3-21-88
88030566	8020	3-08-88	0930		3-18-88	3-21-88
88030566	PCB	3-08-88	0930	3-10-88	3-23-88	
88030567	418.1	3-08-88	1115	3-16-88	3-19-88	
88030567	TDS	3-08-88	1115		3-15-88	
88030567	601	3-08-88	1115		3-18-88	
88030567	8020	3-08-88	1115		3-18-88	
88030567	PCB	3-08-88	1115	3-10-88	3-23-88	
88030568	418.1	3-08-88	1345	3-17-88	3-19-88	
88030568	TDS	3-08-88	1345		3-15-88	
88030568	601	3-08-88	1345		3-18-88	
88030568	8020	3-08-88	1345		3-18-88	
88030568	PCB	3-08-88	1345	3-10-88	3-23-88	
88030569	418.1	3-08-88	1500	3-17-88	3-19-88	
88030569	TDS	3-08-88	1500		3-15-88	
88030569	601	3-08-88	1500		3-14-88	3-18-88
88030569	8020	3-08-88	1500		3-21-88	3-22-88
88030569	PCB	3-08-88	1500	3-10-88	3-23-88	
88030570	601	3-08-88	0800		3-18-88	
88030570	8020	3-08-88	0800		3-18-88	

  
Laboratory Supervisor

\* If applicable  
A SUBSIDIARY OF THE PARSONS CORPORATION  
178.12.9

Job No.: At077  
Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the water samples received  
by this laboratory on 3-09-88.

Sample preparation data

<u>Laboratory Sample No.</u>	<u>Test</u>	<u>Date collected</u>	<u>Time collected</u>	<u>Date* extracted</u>	<u>Date analyzed</u>	<u>Date* 2nd col.</u>
88030565	239.2	3-08-88	0800		5-06-88	
88030566	239.2	3-08-88	0930		5-06-88	
88030567	239.2	3-08-88	1115		5-06-88	
88030568	239.2	3-08-88	1345		5-06-88	
88030569	239.2	3-08-88	1500		5-06-88	

\* If applicable



**ENGINEERING-SCIENCE, INC.**

RESEARCH AND DEVELOPMENT  
LABORATORY  
600 BANCROFT WAY  
BERKELEY, CALIFORNIA 94710  
(415) 841-7353

Job No.: AT077  
Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329  
Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 3-10-88.

Sample preparation data

<u>Laboratory</u> <u>Sample No.</u>	<u>Test</u>	<u>Date</u> <u>collected</u>	<u>Time</u> <u>collected</u>	<u>Date*</u> <u>extracted</u>	<u>Date</u> <u>analyzed</u>	<u>Date*</u> <u>2nd col.</u>
88030572	601	3-09-88	1130		3-18-88	3-14-88
88030572	8020	3-09-88	1130		3-22-88	3-22-88
88030572	PCB	3-09-88	1130	3-14-88	3-23-88	
88030572	418.1	3-09-88	1130	3-16-88	3-19-88	
88030572	TDS	3-09-88	1130		3-15-88	
88030573	601	3-09-88	1030		3-18-88	3-14-88
88030573	8020	3-09-88	1030		3-23-88	3-23-88
88030573	PCB	3-09-88	1030	3-14-88	3-23-88	
88030573	418.1	3-09-88	1030	3-16-88	3-19-88	
88030573	TDS	3-09-88	1030		3-15-88	
88030574	601	3-09-88	0800		3-22-88	
88030574	8020	3-09-88	0800		3-22-88	
88030574	608	3-09-88	0800	3-14-88	3-23-88	
88030574	418.1	3-09-88	0800	3-17-88	3-19-88	
88030574	TDS	3-09-88	0800		3-15-88	
88030575	601	3-09-88	0900		3-18-88	3-22-88
88030575	8020	3-09-88	0900		3-22-88	3-22-88
88030575	PCB	3-09-88	0900	3-14-88	3-24-88	
88030575	418.1	3-09-88	0900	3-17-88	3-19-88	
88030575	TDS	3-09-88	0900		3-15-88	
88030576	601	3-09-88	0930		3-22-88	
88030576	8020	3-09-88	0930		3-22-88	
88030576	PCB	3-09-88	0930	3-14-88	3-24-88	
88030576	418.1	3-09-88	0930	3-17-88	3-19-88	
88030576	TDS	3-09-88	0930		3-15-88	
88030577	601	3-09-88	0830		3-22-88	
88030577	8020	3-09-88	0830		3-22-88	

  
Laboratory Supervisor

\* If applicable

Job No.: AT077

Client: ES Atlanta  
 Attention: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Project: Volk Field ANGB

Attached are the analytical reports for the water samples received by this laboratory on 7-08-88.

Sample Preparation Data

Laboratory Sample No.	Client Sample ID	Test	Date collected	Date* extracted	Date analyzed	Date* 2nd col.
88071335	VF950 GW-1 ES	601	7-07-88		7-19-88	7-18-88
88071335	VF950 GW-1 ES	8020	7-07-88		7-19-88	
88071336	Trip Blank	601	7-07-88		7-18-88	7-18-88
88071336	Trip Blank	8020	7-07-88		7-18-88	
88071337	VF934 GW-1 ES	601	7-07-88		7-18-88	7-18-88
88071337	VF934 GW-1 ES	8020	7-07-88		7-18-88	
88071338	VF916 GW-1 ES	601	7-07-88		7-18-88	7-18-88
88071338	VF916 GR-1 ES	8020	7-07-88		7-18-88	

\* If applicable



**CHAIN OF CUSTODY RECORDS**

























# ENGINEERING-SCIENCE

487-5

## CHAIN OF CUSTODY RECORD

ES JOB NO.	PROJECT NAME/LOCATION		NO. OF CONTAINERS	ANALYSES REQUIRED	SHIP TO:				
	VOLK FIELD ANGB, Wisconsin				ENGINEERING-SCIENCE 600 Bancroft Way Berkeley, California 94710				
SAMPLER(S): (Signature)		SAMPLE DESCRIPTION	TAINERS	SM 5030/8010	SM 3550/E 418.1	SM 3050/7421	SM 3050/8270	SM 3550/8080	REMARKS
DATE	TIME								
<i>Roger Bonner</i>									
<del>14/88</del>	1500	VF1 B-12 55 2 3.5'	5	✓	✓	✓	✓	✓	sample frozen when taken 880217
<del>14/88</del>	1542	VF1 B-12 55 3 8.5'	5	✓	✓	✓	✓	✓	880218
<del>24/88</del>	1600	VF1 B-13 55 1 1.5'	5	✓	✓	✓	✓	✓	sample frozen when taken 880219
<del>24/88</del>	1600	VF1 B-24 55 1 1.5'	5	✓	✓	✓	✓	✓	sample frozen when taken 880300
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	Relinquished by: (Signature)		Date/Time	Received by: (Signature)
<i>Roger Bonner</i>		<del>14/88</del> 16:20							
Relinquished by: (Signature)		Date/Time	Received for Laboratory by: (Signature)		Date/Time	Remarks			
			<i>Bill Friedman</i>		2/10/88 11:30	rec'd cold contact			

Distribution: Original Accompanies Shipment, Copy to Coordinator Field Files

# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

530-2

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		NO. OF CONTAINERS	ANALYSES REQUIRED							SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710
	DATE	TIME		SAMPLE DESCRIPTION	E 601/SW 8020	E 625	E 418.1	E 608- <del>10</del>	E 239.2	23 P.P. METALS	
SAMPLER(S): (Signature) <i>Dharon A. Schultz</i>											
3/4/88	1500	VF, 1-WH, GWL, ES	5	X	X	X	X	X	X	X	REMARKS Well ID number change on labels O.K. 880534
Relinquished by: (Signature) <i>Dharon A. Schultz</i>		Date/Time 3/4/88 1800	Received by: (Signature)		Relinquished by: (Signature)		Date/Time	Received by: (Signature)			
Relinquished by: (Signature)		Date/Time	Received for Laboratory by: (Signature) <i>B. W. Zimmerman</i>		Date/Time 3/5/88 11:00	Remarks received cold & intact					









# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

5305

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710	ANALYSES REQUIRED						REMARKS	
	SAMPLER(S): (Signature) <i>Shaun A. Doherty</i>	NO. OF CONTAINERS		E 601/SW 8020	E 625	E 418.1	E 608- <del>PCB</del> & PCB	E 239.2	23 P.P. METALS		TDS
DATE 3/4/88	TIME 1545	SAMPLE DESCRIPTION VF, I-VI, GVI, ES		X	X	X	X	X	X	880540	
Relinquished by: (Signature) <i>Shaun A. Doherty</i>		Date/Time 3/4/88 1800	Received by: (Signature)	Relinquished by: (Signature)						Date/Time 3/5/88 1130	Received by: (Signature)
Relinquished by: (Signature)		Date/Time	Received for Laboratory by: (Signature) <i>Bill F. ...</i>	Remarks <i>sec'd cold &amp; intact</i>						Date/Time	









# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

534-11  
5/25/88

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		NO. OF CON-TAINERS	ANALYSES REQUIRED							SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710
	SAMPLER(S): (Signature) Sharon A Schultz			E 601/SW 8020	E 625	E 478.1	E 608-PEST & PCB	E 239.2	TDS		
DATE	TIME	SAMPLE DESCRIPTION									REMARKS
3/6/88	1100	VF, 2-W2, GW1, ES	4	X							880562
3/6/88	1330	VF, 2-W5, GW1, ES	4	X							880551
3/6/88	1400	VF, 2-W4, GW1, ES	4	X							880557
3/6/88	1530	VF, 1-W3, GW1, ES	4	X							fuel odor 880554
3/7/88	0845	VF, 10-W1, GW1, ES	4	X							H <sub>2</sub> S odor 880555
3/7/88	0930	VF, 10-W2, GW1, ES	4	X							H <sub>2</sub> S odor 880558
3/7/88	1015	VF, 10-W3, GW1, ES	4	X							880559
3/7/88	1045	VF, 10-W4, GW1, ES	4	X							H <sub>2</sub> S odor 880561
3/7/88	1100	VF, 10-W5, GW1, ES	4	X							H <sub>2</sub> S odor 880560
3/7/88	1345	VF, 2-W3, GW1, ES	4	X							880550
3/7/88	1430	VF, 2-1 SW1, ES	4	X							880552
3/7/88	1530	VF, 11-W4, GW1, ES	2	X							880563
5/7/88	1500	VF, 2-2, SW1, ES	4	X							H <sub>2</sub> S odor 880553
Relinquished by: (Signature) Sharon A Schultz			Received by: (Signature)			Relinquished by: (Signature)			Received by: (Signature)		
Date/Time 3/7/88 1800			Date/Time			Date/Time			Date/Time		
Relinquished by: (Signature) Sharon A Schultz			Received for Laboratory by: (Signature) P. J. (P) [Signature]			Remarks for Lab: (Signature)			Remarks for Lab: (Signature)		
Date/Time			Date/Time			Date/Time			Date/Time		

Remarks for Lab: 880563 identification changed was per conversation with Sharon Schultz





# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

538-2

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710	ANALYSES REQUIRED							REMARKS	
	SAMPLE(S): (Signature) <i>Dhawan A. Schultz</i>	SAMPLE DESCRIPTION		E 601/SW 8020	E 625	E 478.1	E 608- <del>ROF</del> & PCB	E 239.2	23 P.P. METALS	TDS		
DATE	TIME	NO. OF CONTAINERS	NO.	OF	CON-TAINERS	RECEIVED BY: (Signature)	DATE/TIME	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME	REMARKS
3/9/88	1030	6	6									Heavy fuel odor, free-floating product 880573
Relinquished by: (Signature) <i>Dhawan A. Schultz</i>		Date/Time 3/9/88 1800		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time		Remarks
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature) <i>Bill Friedman</i>		Date/Time 3/19/88 12:30		Remarks <i>Rec'd cold &amp; intact</i>				

# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

538-3

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710	ANALYSES REQUIRED						REMARKS 880574	
	SAMPLER(S): (Signature) <i>Sharon A. Schultz</i>	NO. OF CONTAINERS 5		E 601/SW 6020	E 625	E 478.1	E 608-PEST & PCB	E 239.2	23 P.P. METALS		TDS
DATE 3/9/88	TIME 0800	SAMPLE DESCRIPTION VF, 13-WI, GW1, ES									
Relinquished by: (Signature) <i>Sharon A. Schultz</i>	Date/Time 3/9/88 1800	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) <i>Bill Schneider</i>	Date/Time	Relinquished by: (Signature)	Date/Time 3/10/88 12:30	Remarks rec'd cold & intact	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	

# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

538-4

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		NO. OF CONTAINERS	ANALYSES REQUIRED						SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710		
	SAMPLER(S): (Signature) <i>Dharan A. Scholtz</i>	SAMPLE DESCRIPTION		E 601/SW 8C20	E 625	E 418.1	E 608- <del>PCB</del> & PCB	E 239.2	23 P.P. METALS		TDS	
3/9/88 0900	VF, ET-7, GW1, ES	6		X	X	X	X	X	X	fuel odor	880575	
Relinquished by: (Signature) <i>Dharan A Scholtz</i>			Date/Time 3/9/88 1800	Received by: (Signature)	Relinquished by: (Signature)						Date/Time	Received by: (Signature)
Relinquished by: (Signature)			Date/Time	Received for Laboratory by: (Signature) <i>Bill Friedman</i>	Date/Time 3/10/88 12:30						Remarks <i>rec'd cold &amp; intact</i>	

# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

538.5

<b>ES JOB NO.</b> AT077	<b>PROJECT NAME/LOCATION</b> VOLK ANGB	<b>NO. OF CONTAINERS</b> 6	<b>SHIP TO:</b> E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710	
<b>SAMPLER(S): (Signature)</b> <i>Pharan A Schultz</i>		<b>SAMPLE DESCRIPTION</b> VF, EI-6, GW1, ES	<b>ANALYSES REQUIRED</b>	
<b>DATE</b> 3/5/88	<b>TIME</b> 0930		E 601/SW 8020	E 625
			E 478.1	E 608- <del>80</del> & PCB
			E 239.2	23 P.P. METALS
			TDS	REMARKS 880576
<b>Relinquished by: (Signature)</b> <i>Pharan A Schultz</i>	<b>Date/Time</b> 3/5/88 1800	<b>Received by: (Signature)</b>	<b>Date/Time</b>	<b>Received by: (Signature)</b>
<b>Relinquished by: (Signature)</b>	<b>Date/Time</b>	<b>Received for Laboratory by: (Signature)</b> <i>Bill Schneider</i>	<b>Date/Time</b> 3/10/88 12:30	<b>Remarks</b> <i>rec'd add &amp; intact</i>

# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

538-6

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		NO. OF CONTAINERS	ANALYSES REQUIRED						SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710
	DATE	TIME		SAMPLE DESCRIPTION	E 601/SW 6020	E 418.1	E 606-PEST & PCB	E 239.2	23 P.P. METALS	
SAMPLE(S): (Signature) <i>Pharon A. Schult</i>										
3/9/88	0800	VF, 13-VI, 6WI, ES	4	X						880574
3/9/88	0830	VF, 11-VI, 6WI, ES	2	X						880577
3/9/88	0900	VF, ET-3, 6WI, ES	4	X						Fuel odor 880575
3/9/88	0930	VF, ET-6, 6WI, ES	4	X						880576
3/9/88	1030	VF, ET-4, 6WI, ES	4	X						Heavy fuel odor free flushing product
3/9/88	1130	VF, ET-5, 6WI, ES	4	X						Heavy fuel odor, free flushing product 880572
Relinquished by: (Signature) <i>Pharon A. Schult</i> Date/Time 3/9/88 1800										
Received by: (Signature) _____ Date/Time _____										
Relinquished by: (Signature) _____ Date/Time _____										
Received for Laboratory by: (Signature) <i>Bill Friedman</i> Date/Time 3/9/88 12:30										
Remarks rec'd cold & intact										



# ENGINEERING-SCIENCE

## CHAIN OF CUSTODY RECORD

536-2

ES JOB NO. AT077	PROJECT NAME/LOCATION VOLK ANGB		NO. OF CONTAINERS	ANALYSES REQUIRED							SHIP TO: E.S. Berkeley Lab 600 Bancroft Way Berkeley, Ca 94710
	SAMPLER(S): (Signature) <i>Dwan A. Schultz</i>			E 601/SW 8020	E 625	E 418.1	E 608-PEST & PCB	E 239.2	23 P.P. METALS	TDS	
DATE	TIME	SAMPLE DESCRIPTION	TAINERS								REMARKS
3/8/88	0930	VF, 1-W2, GW1, ES	2				X	X	X		880566
3/8/88	1115	VF, ET-1, GW1, ES	2				X	X	X		880567
3/8/88	1345	VF, ET-2, GW1, ES	2				X	X	X		880568
3/8/88	1500	VF, ET-3, GW1, ES	2				X	X	X		Has + fuel odor (Heavy) 880569
E-556											
			Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Date/Time		Received by: (Signature)
			<i>Schultz</i>		3/8/88 1800						
			Received for Laboratory by: (Signature)		Date/Time		Remarks		Date/Time		
			<i>Bill Friedman</i>				3/8/88 15:15		cold & intact		













**APPENDIX F**  
**QUALITY ASSURANCE REPORT**

## **APPENDIX F**

### **QUALITY ASSURANCE REPORT**

This appendix presents a summary and review of quality assurance and quality control results for laboratory analysis of water, sediment, and soil samples collected as part of the field program for the Remedial Investigation at Volk Field, Wisconsin. The analyses were performed by ES Research and Development Laboratories in Berkeley, California.

The documentation reporting results of analyses for environmental, laboratory quality control, field duplicate, trip blank, and equipment rinsate samples were reviewed to assess the completeness, representativeness, precision and accuracy of the analytical results. The completeness of the analysis was determined by comparison of tests requested versus analyses results obtained; these data are shown as collection and analyses dates for each sample and test in Tables F.1 and F.2. Representativeness was evaluated from the analysis results obtained for trip blanks, field blanks, bailer rinsate blanks and coded field duplicate samples; these data are presented in Tables F.3, F.4 and F.5. Precision and accuracy were assessed by comparison of duplicate analyses results and spiked sample percentage recoveries respectively; these data are presented in the Attachment following Table F.5.

#### **F.1 HOLDING TIMES**

Holding times were met for all analyses on groundwater, surface water, and soil samples. Dates of collection, extraction and analysis for all water samples are presented in Table F.1. Those for soil samples are presented in Table F.2. In both tables, the holding time in days from collection is given in parentheses after the extraction or analysis date, except for the analysis of PCBs and semi-volatile organics. For these analyses, the holding time begins with the date of extraction, as required by the methods.

#### **F.2 COMPLETENESS**

All analyses were completed with valid data. The report exceeds the completeness criteria of 90 percent.

### **F.3 FIELD QUALITY CONTROL SAMPLES**

Field quality control samples consisted of trip blanks, bailer rinsate blanks, field blanks and coded field duplicates. Trip blanks are samples of laboratory-pure water shipped with the sampling containers, and are not opened once sealed by the laboratory. They serve to detect potential sample contamination during shipment, handling and storage of samples between collection and analysis. One trip blank accompanies each container of samples for volatiles analysis. No analytes were detected in any of the trip blanks. These data are presented in Table F.3.

During the course of sampling for water samples, three bailer rinsate samples were collected. The only analytes detected were copper (in one sample), lead (one sample) and zinc (two samples). The copper and one of the zinc analyses showed concentrations near the detection limits. The bailer rinsate from March 3, 1988, however, indicated that very small amounts of lead (7 ug/L) and zinc (10 ug/L) could have been introduced into the environmental samples during collection. Therefore, analysis results for lead and zinc collected between March 3 and March 6 should be noted as possible contamination or as estimated values unless the sample concentrations exceed those found in the rinsate blank by a factor of 5. These data are presented in Table F.3.

One field (source water) blank was collected. This sample also showed very low concentrations of both copper and zinc. These levels, however, are below the quantifiable range and are therefore indicated as "trace" with an estimated quantity. These data are presented in Table F.3.

Coded field duplicate samples were collected for both soil samples and groundwater and surface water samples. Both the actual and the coded sample identifiers and the analysis results of both the coded and correctly identified samples, along with the mean and the relative percent difference (RPD) are presented in Table F.4 (soil samples) and Table F.5 (water samples).

For soil samples the analyses indicate that the sample collection was representative. While the numerical values of the RPD of some of the purgeable halocarbons and of the aromatic volatile organics were somewhat large, analytes present in one duplicate were also present in the other; those absent in one were absent in the others. Given the heterogenous nature of soil and the volatility of the compounds, the data for soil samples should be considered representative.

For the water samples, the numerical values of the RPD (where calculated) were much smaller than those found for soil samples. One groundwater sample, however, showed both naphthalene and bis(2-ethylhexyl)phthalate which were absent in the coded duplicate. Toluene was detected in another groundwater sample while being absent from the duplicate sample. All are present below 10 ug/L, however, so these levels are not considered significant. Analysis results of the water samples should, therefore, be considered representative of the groundwater and surface waters at Volk Field, except for the caveat on zinc and lead noted above.

#### **F.4 LABORATORY QUALITY CONTROL DATA**

Laboratory Quality Control Data consist of the results obtained from the analysis of laboratory blanks, laboratory control samples, surrogate spikes, spiked samples, and laboratory duplicate samples. Laboratory blank analysis results should be less than the detection limit for all analytes.

A laboratory control sample is a sample of known concentration that is analyzed as an additional sample of the sample set. The PR of these samples indicates whether the analysis system is in control. The use of laboratory control samples is standard ES laboratory policy. The results of these samples for PCBs are included and indicate the analytical system was within the control limits dictated by EPA guidelines.

Surrogate spike compounds are analytes added to each sample at a known concentration. The recovery of these compounds may be determined and indicate whether the matrix of the sample is affecting the analytical results. The use of surrogate spikes is required for some methods but only recommended for other in the published EPA methodology. The results of these surrogate spikes are presented in the Attachment. The data indicate that the analysis systems for PCBs, volatile organic compounds, and semi-volatile organic compounds were within control as specified by EPA guidelines.

##### **F.4.1 Metals Analyses Criteria**

A relative percentage difference (RPD) of less than 20 percent is normally used as a guide for assessment of precision for duplicate analyses on samples containing analyte at concentrations greater than five times the method detection limit. The uncertainty of quantitation increases greatly at lower concentrations.



Thus, the analyte concentration was considered in addition to the RPD value for determination of the acceptability of analytical precision for a test. The heterogeneous nature of soil and sediment samples also must be considered in evaluation of precision.

Accuracy of analytical results is measured as the percentage recovery (PR) of a laboratory sample spike. For analyte concentrations within the quantitation range, a PR between 80 and 120 percent is generally considered acceptable. Larger deviations from 100 percent should be expected for samples for which the unspiked analysis result is near or below the quantitation limit. Heterogeneity of soil and sediment samples also affects the PR. Thus, the sample type and ambient analyte concentration were considered in addition to the PR in determining the acceptability of analytical accuracy for a test.

#### **F.4.2 Organic Analyses Criteria**

For organic methods of analysis, each method specifies the precision and recovery criteria required for that method. The limitations are again set at five times the method detection limit, unless the method specifies otherwise.

#### **F.4.3 Laboratory Results**

In all cases, laboratory blank analysis results were below required detection limits. In some cases, RPD or PR criteria were not met for some samples, but other laboratory data (laboratory control sample analysis) indicated that the analysis system was in control. This is an indication of a matrix and not a laboratory problem which does not invalidate the analysis results. Whenever this occurred, an explanation was given in the accompanying Case Narrative, or on the QC report. In all cases, the data presented indicate that the data are acceptable. All laboratory quality control data are presented in the Attachment.

TABLE F.1  
SUMMARY OF HOLDING TIMES  
FOR GROUND WATER SAMPLES

SAMPLE IDENTIFIER	DATE SAMPLED	POURABLE	AROMATIC	TOTAL	PETROLEUM	ORGANOCHLORINE	SEMI-VOLATILE		LEAD	
		HALOCARBOHS SM8010/K601	VOLATILE ORGANICS SM8020/K602	DISSOLVED SOLIDS K160.1	HYDROCARBOHS K418.1	PESTICIDES AND PCB'S SM8080/K608	ORGANICS K625	ORGANICS K625	ANALYSIS (K239.2)	
		(14 DAYS)	(14 DAYS)	(7 DAYS)	(28 DAYS)	(7 DAYS) EXTRACTED	(40 DAYS) ANALYZED	(7 DAYS) EXTRACTED	(40 DAYS) ANALYZED	(180 DAYS)
FINE TRAINING AREA - SITE 1										
VF-1-W1-GW1-KS	3-4-88	3-15-88(11)	3-15-88(11)	3-10-88(6)	3-18-88(14)	3-8-88(4)	3-23-88(15)	3-7-88(3)	3-17-88(10)	5-5-88(62)
VF-1-W2-GW1-KS	3-8-88	3-18-88(10)	3-18-88(10)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-12-88(4)	4-8-88(27)	5-6-88(59)
VF-1-W3-GW1-KS	3-6-88	3-17-88(11)	3-17-88(11)	3-10-88(4)	3-18-88(12)	3-10-88(4)	3-23-88(13)	3-11-88(5)	4-11-88(31)	5-4-88(59)
VF-1-W4-GW1-KS	3-4-88	3-18-88(14)	3-18-88(14)	3-10-88(6)	3-18-88(14)	3-8-88(4)	3-23-88(15)	3-7-88(3)	3-18-88(11)	5-5-88(62)
VF-1-W5-GW1-KS (a)	3-4-88	3-15-88(11)	3-15-88(11)	3-10-88(6)	3-18-88(14)	3-8-88(4)	3-23-88(15)	3-7-88(3)	3-18-88(11)	5-5-88(62)
VF-1-E71-GW1-KS	3-8-88	3-18-88(10)	3-18-88(10)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-12-88(4)	4-12-88(31)	5-6-88(59)
VF-1-E72-GW1-KS	3-8-88	3-18-88(10)	3-18-88(10)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-14-88(6)	4-12-88(29)	5-6-88(59)
VF-1-E73-GW1-KS	3-8-88	3-14-88(6)	3-21-88(13)	3-15-88(7)	3-19-88(11)	3-10-88(2)	3-23-88(13)	3-12-88(4)	4-13-88(32)	5-6-88(59)
VF-1-E74-GW1-KS	3-9-88	3-18-88(9)	3-23-88(14)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-23-88(9)	3-14-88(5)	4-13-88(30)	5-6-88(58)
VF-1-E75-GW1-KS	3-9-88	3-18-88(9)	3-22-88(13)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-23-88(9)	3-14-88(5)	4-13-88(30)	5-6-88(58)
VF-1-E76-GW1-KS	3-9-88	3-22-88(13)	3-22-88(13)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-24-88(10)	3-14-88(5)	4-14-88(31)	5-6-88(58)
VF-1-E77-GW1-KS	3-9-88	3-18-88(9)	3-22-88(13)	3-15-88(6)	3-19-88(10)	3-14-88(5)	3-24-88(10)	3-14-88(5)	4-14-88(31)	5-6-88(58)

(a) - This sample was a coded field duplicate of the sample listed above it in this table.

TABLE F.2  
SUMMARY OF HOLDING TIMES FOR  
SOIL SAMPLES

SAMPLE IDENTIFIER	DATE SAMPLED	PURGEABLE	AROMATIC	PETROLEUM	ORGANOCHLORINE		SEMI-VOLATILE		LEAD
		KALOCARBONS (SH0010)	VOLATILE ORGANICS (SH0020)	HYDROCARBONS (K010.1)	PESTICIDES AND PCB'S (SH0000)	ORGANICS (K025)	ANALYSIS (SH421)		
		(14 DAYS)	(14 DAYS)	(28 DAYS)	(14 DAYS) EXTRACTED	(40 DAYS) ANALYZED	(14 DAYS) EXTRACTED	(40 DAYS) ANALYZED	(100 DAYS)
FINE TRAINING AREA - SITE 1									
YF1-01-SS1-0.5	1-20-00	1-20-00(2)	2-1-00(6)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-12-00(11)	5-10-00(105)
YF1-01-SS2-3.5	1-20-00	2-3-00(0)	1-29-00(3)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-12-00(11)	5-10-00(105)
YF1-01-SS3-0.5	1-20-00	1-20-00(2)	2-1-00(6)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-12-00(11)	5-10-00(105)
YF1-02-SS1-0.5	1-20-00	2-9-00(14)	2-1-00(6)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-9-00(8)	5-10-00(105)
YF1-02-SS2-3.5	1-20-00	2-7-00(12)	2-9-00(14)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-9-00(8)	5-10-00(105)
YF1-02-SS3-0.5	1-20-00	2-7-00(12)	2-7-00(12)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-9-00(8)	5-10-00(105)
YF1-03-SS1-1.0	1-20-00	2-7-00(12)	2-9-00(14)	2-17-00(22)	1-20-00(2)	2-29-00(32)	2-1-00(6)	2-9-00(8)	5-11-00(106)
YF1-03-SS1-1.0 (a)	1-20-00	1-20-00(2)	1-20-00(2)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-6-00(7)	5-10-00(105)
YF1-03-SS2-3.5	1-20-00	2-7-00(12)	2-9-00(14)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-9-00(8)	5-11-00(106)
YF1-03-SS3-0.5	1-20-00	1-20-00(2)	1-20-00(2)	2-17-00(22)	1-20-00(2)	2-29-00(32)	2-1-00(6)	2-6-00(7)	5-10-00(105)
YF1-04-SS1-0.5	1-20-00	2-3-00(0)	2-1-00(6)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-16-00(15)	5-12-00(107)
YF1-022-SS1-0.5 (a)	1-20-00	1-20-00(2)	2-9-00(14)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-16-00(15)	5-10-00(105)
YF1-04-SS2-3.5	1-20-00	2-9-00(14)	2-9-00(14)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-9-00(8)	5-11-00(106)
YF1-04-SS3-0.5	1-20-00	2-5-00(9)	2-9-00(14)	2-17-00(22)	1-20-00(2)	2-22-00(25)	2-1-00(6)	2-12-00(11)	5-11-00(106)
YF1-05-SS1-0	1-27-00	2-5-00(9)	2-10-00(14)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-22-00(20)	5-11-00(105)
YF1-05-SS2-3.5	1-27-00	2-5-00(9)	2-10-00(14)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-23-00(21)	5-11-00(105)
YF1-05-SS3-0.5	1-27-00	2-5-00(9)	2-10-00(14)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-23-00(21)	5-11-00(105)
YF1-06-SS1-10	1-27-00	2-5-00(9)	2-10-00(14)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-23-00(21)	5-11-00(105)
YF1-06-SS2-3.5	1-27-00	2-4-00(8)	2-10-00(14)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-23-00(21)	5-11-00(105)
YF1-06-SS3-0.5	1-27-00	2-4-00(8)	2-10-00(14)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-22-00(20)	5-11-00(105)
YF1-07-SS1-0	1-27-00	2-5-00(9)	2-9-00(13)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-22-00(20)	5-11-00(105)
YF1-07-SS2-3.5	1-27-00	2-5-00(9)	2-9-00(13)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-22-00(20)	5-11-00(105)
YF1-07-SS3-0.5	1-27-00	2-4-00(8)	2-9-00(13)	2-17-00(21)	1-29-00(2)	2-23-00(25)	2-2-00(6)	2-19-00(17)	5-11-00(105)
YF1-08-SS1-0	1-20-00	2-11-00(14)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-08-SS2-3.5	1-20-00	2-11-00(14)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-08-SS3-0.5	1-20-00	2-11-00(14)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-09-SS1-0	1-20-00	2-11-00(14)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-026-SS1-0 (a)	1-20-00	2-11-00(14)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-09-SS2-3.5	1-20-00	2-11-00(14)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-09-SS3-0.5	1-20-00	2-10-00(13)	2-11-00(14)	2-17-00(20)	2-2-00(5)	2-23-00(21)	2-2-00(5)	3-1-00(27)	5-11-00(104)
YF1-10-SS1-0.5	2-9-00	2-16-00(7)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-6-00(20)	5-11-00(92)
YF1-027-SS1-0.5 (a)	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-6-00(20)	5-12-00(93)
YF1-10-SS2-3.5	2-9-00	2-16-00(7)	2-16-00(7)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-9-00(21)	5-11-00(92)
YF1-10-SS3-0.5	2-9-00	2-19-00(10)	2-19-00(10)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-9-00(21)	5-11-00(92)
YF1-11-SS1-1.0	2-9-00	2-16-00(7)	2-16-00(7)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-10-00(22)	5-11-00(92)
YF1-11-SS2-3.5	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-10-00(22)	5-11-00(92)
YF1-11-SS3-0.5	2-9-00	2-23-00(14)	2-19-00(10)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-10-00(22)	5-11-00(92)
YF1-112-SS1-1.0	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-10-00(22)	5-11-00(92)
YF1-112-SS2-3.5	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-10-00(22)	5-11-00(92)
YF1-112-SS3-0.5	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-10-00(22)	5-11-00(92)
YF1-113-SS1-1.5	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-11-00(23)	5-11-00(92)
YF1-020-SS1-1.5 (a)	2-9-00	2-17-00(8)	2-17-00(8)	2-27-00(10)	2-16-00(7)	2-27-00(11)	2-17-00(8)	3-11-00(23)	5-11-00(92)
YF1-113-SS2-3.5	2-10-00	2-10-00(8)	2-10-00(8)	2-20-00(10)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)
YF1-113-SS3-0.5	2-10-00	2-19-00(9)	2-19-00(9)	2-20-00(10)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)
YF1-014-SS1-1.0	2-10-00	2-19-00(9)	2-19-00(9)	2-20-00(10)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)
YF1-014-SS2-3.5	2-10-00	2-19-00(9)	2-19-00(9)	2-20-00(10)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)
YF1-014-SS3-0.5	2-10-00	2-17-00(7)	2-17-00(7)	2-27-00(17)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-14-00(22)	5-11-00(91)
YF1-015-SS1-0.5	2-10-00	2-17-00(7)	2-17-00(7)	2-27-00(17)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)
YF1-015-SS2-3.5	2-10-00	2-17-00(7)	2-17-00(7)	2-20-00(10)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)
YF1-015-SS3-0.5	2-10-00	2-10-00(8)	2-10-00(8)	2-20-00(10)	2-23-00(13)	2-27-00(4)	2-21-00(11)	3-15-00(23)	5-11-00(91)

(a) - This sample was a coded field duplicate of the sample listed above it in this table.

TABLE F.3  
YORK FIELD ARGO  
SUMMARY OF CHEMICAL ANALYSES FOR  
TRIP BLANKS, BAILED RINSATE AND FIELD BLANKS

SAMPLE IDENTIFIER	DATE SAMPLED	POURABLE HALOCARBONS E601(ug/L)	AROMATIC VOLATILE ORGANICS SW6020(ug/L)	PETROLEUM HYDROCARBONS E418.1(ug/L)	TOTAL DISSOLVED SOLIDS - E160.1 (ug/L)	PCB's SW8000/E600 (ug/L)	BASE/NEUTRALS ACID EXTRACTABLES E625(ug/L)	METALS - SW3010/206.7 SW3020/206.2, 239.2, 270.2, 7470 - (ug/L)	
		Results	Results	Results	Results	Results	Results	ELEMENT	Results
<b>TRIP BLANKS</b>									
YF-11-N1-GW1-ES	03/02/00	ND	ND	NA	NA	NA	NA	---	NA
YF-11-N2-GW1-ES	03/03/00	ND	ND	NA	NA	NA	NA	---	NA
YF-11-N3-GW1-ES	03/04/00	ND	ND	NA	NA	NA	NA	---	NA
YF-11-N4-GW1-ES	03/07/00	ND	ND	NA	NA	NA	NA	---	NA
YF-11-N5-GW1-ES	03/08/00	ND	ND	NA	NA	NA	NA	---	NA
YF-11-N6-GW1-ES	03/09/00	ND	ND	NA	NA	NA	NA	---	NA
<b>BAILED RINSATE</b>									
YF-12-N1-GW1-ES	03/03/00	ND	ND	ND	ND	ND	ND	Cu	0.018
								Pb	0.007
								Zn	0.03
YF-12-N2-GW1-ES	03/06/00	ND	ND	ND	ND	ND	ND	Zn	0.018
YF-12-N3-GW1-ES	03/08/00	ND	ND	ND	ND	ND	ND	Pb	ND
<b>FIELD BLANKS</b>									
YF-13-N1-GW1-ES	03/09/00	ND	ND	ND	ND	ND	ND	Cu	0.018
								Zn	0.018

ND - Not Detected  
DL - Detection Limit  
B - Reported value is less than Reporting limit but greater than the EDL.  
NA - Not Applicable

TABLE F.4  
SUMMARY OF RESULTS FOR CODED  
FIELD DUPLICATES OF SOIL SAMPLES

IDENTIFIER NUMBER ONE (ACTUAL SAMPLE ID)	IDENTIFIER NUMBER TWO	UNITS	RESULT ONE	RESULT TWO	AVERAGE	RELATIVE PERCENT DIFFERENCE RPD
<b>PURCHABLE HALOCARBONS (SM8010)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	ug/kg	ND	ND	NC	NC
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	ug/kg	TETRACHLOROETHYLENE 0.53	TETRACHLOROETHYLENE 0.73	0.63	31.8
			TRICHLOROETHYLENE 8.0	TRICHLOROETHYLENE 41	24.5	134.7
YF1-B9-SS1-0	YF1-B26-SS1-0	ug/kg	ND	ND	NC	NC
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	ug/kg	ND	ND	NC	NC
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	ug/kg	ND	ND	NC	NC
<b>AROMATIC VOLATILE ORGANICS (SM8020)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	ug/kg	ND	ND	NC	NC
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	ug/kg	BENZENE 2,000	BENZENE 170	1,085	168.7
			ETHYLBENZENE 4,800	ETHYLBENZENE 1,100	2,950	125.4
			TOLUENE 2,500	TOLUENE 1,000	1,750	85.7
			XYLENES 9,800	XYLENES 15,000	12,400	41.9
YF1-B9-SS1-0	YF1-B26-SS1-0	ug/kg	ND	ND	NC	NC
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	ug/kg	ND	ND	NC	NC
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	ug/kg	ND	ND	NC	NC
<b>PETROLEUM HYDROCARBONS (R418.1)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	ug/kg	260	130	195	66.7
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	ug/kg	11,000	11,000	11,000	0
YF1-B9-SS1-0	YF1-B26-SS1-0	ug/kg	<100	<100	NC	NC
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	ug/kg	570	750	660	27.3
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	ug/kg	<100	<100	NC	NC
<b>PCB'S (SM8080)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	ug/kg	ND	ND	NC	NC
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	ug/kg	ND	ND	NC	NC
YF1-B9-SS1-0	YF1-B26-SS1-0	ug/kg	ND	ND	NC	NC
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	ug/kg	ND	ND	NC	NC
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	ug/kg	ND	ND	NC	NC
<b>SEMI-VOLATILE ORGANICS (SM8270)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	ug/kg	ND	ND	NC	NC
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	ug/kg	ND	ND	NC	NC
YF1-B9-SS1-0	YF1-B26-SS1-0	ug/kg	ND	ND	NC	NC
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	ug/kg	ND	ND	NC	NC
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	ug/kg	ND	ND	NC	NC
<b>METALS - LEAD (R239.2)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	ug/kg	1.7	1.6	1.65	6.1
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	ug/kg	62.05	85.0	73.5	31.2
YF1-B9-SS1-0	YF1-B26-SS1-0	ug/kg	2.3	2.3	2.3	0
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	ug/kg	4.4	4.05	4.23	8.3
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	ug/kg	0.8	2.4	1.6	100
<b>% MOISTURE TOA (ASTM D2216-7)</b>						
YF1-B3-SS1-1.0	YF1-B21-SS1-1.0	%	4	4	4	0
YF1-B4-SS1-0.5	YF1-B22-SS1-0.5	%	6	3	4.5	66.7
YF1-B9-SS1-0	YF1-B26-SS1-0	%	4	4	4	0
YF1-B10-SS1-0.5	YF1-B27-SS1-0.5	%	5	5	5	0
YF1-B13-SS1-1.5	YF1-B28-SS1-1.5	%	1	1	1	0

S - Reported value was determined by the method of Standard Additions  
 NC - Not Calculated  
 ND - Not Detected

TABLE F.5  
SUMMARY OF RESULTS FOR CODED FIELD  
DUPLICATE WATER SAMPLES

IDENTIFIER NUMBER ONE (ACTUAL SAMPLE ID)	IDENTIFIER NUMBER TWO	UNITS	RESULT ONE	RESULT TWO	AVERAGE	RELATIVE PERCENT DIFFERENCE (RPD)
<b>PERCYCLABLE HALOCARBONS (SM0010/EG01)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	ND	ND	NC	NC
<b>AROMATIC VOLATILE ORGANICS (SM0020/EG02)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	BENZENE 4.9 TOLUENE 0.44 XYLENES 4	BENZENE 4.5 ND XYLENES 4.7	4.70 NC 4.35	0.5 NC 16.1
<b>PETROLEUM HYDROCARBONS (K110.1)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	<1	<1	<1	NC
<b>TOTAL DISSOLVED SOLIDS (K160.1)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	129	164	146.5	23.9
<b>PCB'S (SM0000/EG00)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	ND	ND	NC	NC
<b>SEMI VOLATILE ORGANICS (K625)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	NAPHTHALENE 2.3 BIS(2-ETHYLHEXYL)- PHTHALATE 9.0	ND ND	NC NC	NC NC
<b>METALS:</b>						
<b>LEAD (K239.2)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	0.010	0.020	0.015	66.7
<b>BERYLLIUM (K200.7)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	NA	NA	NC	NC
<b>CHROMIUM (K200.7)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	NA	NA	NC	NC
<b>COPPER (K200.7)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	NA	NA	NC	NC
<b>ZINC (K200.7)</b>						
YF-1-W1-GW1-ES	YF-1-W5-GW1-ES	ug/l	NA	NA	NC	NC

NA - Not Analyzed  
NC - Not Calculated  
ND - Not Detected

**ATTACHMENT - LABORATORY QC DATA**

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-W-0020-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030558-0562, 88030566-0567,  
88030572-0573

F-10

Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	C1	C2	Duplicate RPD	SA	SR	Spike Recovery SSR	Notes
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Petroleum Hydrocarbons	88030566	88030567	3/19/88	418.1	<1	<1	<1	NC	10	<1	7.1	71 *
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\* Percent recovery is within the ES laboratory control limits.

NA - Not applicable  
NC - Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 - Concentration One  
C2 - Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR - Spiked Sample Result  
SR - Sample Result  
SA - Spike Added (Concentration)



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QUALITY CONTROL RESULTS SUMMARY  
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ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-W-0021-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030539-0541, 88030551-0557

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Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes			
						C1	C2	RPD	SA		SR	SSR	PR
Petroleum													
Hydrocarbons	88030554	88030555	3/18/88	418.1	<1	1.6	1.6	0	10	<1	7.2	72	*

\* Percent recovery is within the ES laboratory control limits.

NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

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ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-W-0024-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030558-0562, 88030565-0567,  
88030572-0573

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Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	C1	Duplicate C2	RPD	SA	SR	Spike Recovery SSR	Notes PR
Petroleum Hydrocarbons	88030566	88030567	3/19/88	418.1	<1	<1	<1	NC	10	<1	7.1	71 *

\* Percent recovery is within the ES laboratory control limits.

NA - Not applicable  
NC - Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

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ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-W-0025-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030568-0569, 88030574-0576

Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes			
						C1	C2	RPD	SA		SR	SSR	PR
Petroleum													
Hydrocarbons	88030568	88030569	3/19/88	418.1	<1	<1	<1	NC	10	26	32	60	*

\* Percent recovery is within the ES laboratory control limits.  
NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$
$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

C1 = Concentration One  
C2 = Concentration Two  
SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Jimmy Duncan  
Address: 57 Executive Park Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-S-0013-88  
Date Reported: 4-04-88  
Laboratory Supervisor Approval:



Sample Matrix:  
Soil (mg/Kg)

\*Moisture: NA

QC Report for Sample No.: 88010186-0195

Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date	Anal Method	Blank	Duplicate		Spike Recovery		Notes		
						C1	C2	RPD	SA		SR	SSR
Petroleum												
Hydrocarbons	88010186	88010186	2-17-88	418.1	<100	<100	<100	NC	1000	<100	830	83

\* If % moisture is reported, results are presented on a dry-weight basis.

NA = Not applicable NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Jimmy Duncan  
Address: 57 Executive Park Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-S-0014-88  
Date Reported: 4-04-88  
Laboratory Supervisor Approval:



Sample Matrix:  
Soil (mg/Kg)

\*Moisture: NA

QC Report for Sample No.: 88010196-0199, 88010204-0209

Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Blank Method	C1	Duplicate C2	RPD	SA	Spike Recovery SR	SSR	PR	Notes
Petroleum Hydrocarbons	88010204	88010204	2-17-88	418.1	<100	<100	NC	1000	<100	860	86	

\* If % moisture is reported, results are presented on a dry-weight basis.  
NA = Not applicable NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100 \quad C1 = \text{Concentration One} \quad C2 = \text{Concentration Two}$$

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100 \quad \text{SSR} = \text{Spiked Sample Result} \quad \text{SR} = \text{Sample Result} \quad \text{SA} = \text{Spike Added (Concentration)}$$

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Jimmy Duncan  
Address: 57 Executive Park Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-S-0015-88  
Date Reported: 4-04-88  
Laboratory Supervisor Approval:



Sample Matrix:  
Soil (mg/Kg)

\*Moisture: NA

QC Report for Sample No.: 88010210-0212, 88010214-0220

Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date	Anal Method	Blank	Duplicate		Spike Recovery		Notes	
						C1	C2	SA	SR		
Petroleum											
Hydrocarbons	88010220	88010220	2-17-88	418.1	<100	<100	NC	1000	<100	1000	100

\* If % moisture is reported, results are presented on a dry-weight basis.  
NA = Not applicable NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100 \quad \begin{matrix} C1 = \text{Concentration One} \\ C2 = \text{Concentration Two} \end{matrix}$$

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100 \quad \begin{matrix} SSR = \text{Spiked Sample Result} \\ SR = \text{Sample Result} \\ SA = \text{Spike Added (Concentration)} \end{matrix}$$

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QUALITY CONTROL RESULTS SUMMARY  
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ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-S-0016-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
Soil (mg/Kg)

\*Moisture: NA  
QC Report for Sample Nos.:  
88020289-0298

Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	C1	C2	Duplicate RPD	SA	Spike Recovery		Notes	
										SR	SSR		
Petroleum													
Hydrocarbons	88020289	88020289	2/27/88		418.1	<100	<100	<100	NC	1000	<100	920	92

\* If % moisture is reported, results are presented on a dry-weight basis.  
NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

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QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

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ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: TPH-S-0017-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:

*AWB*

Sample Matrix:  
Soil (mg/Kg)

\*Moisture: NA  
QC Report for Sample Nos.:  
88020299-0300, 88020371-0378

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Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date	Anal Method	Blank	Duplicate		Spike Recovery		Notes
						C1	C2	SA	SSR	
Petroleum										
Hydrocarbons	88020299	88020299	2/27/88	418.1	<100	<100	<100	1000	<100	810 81

\* If % moisture is reported, results are presented on a dry-weight basis.

NA = Not applicable

NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100 \quad C1 = \text{Concentration One} \\ C2 = \text{Concentration Two}$$

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100 \quad SSR = \text{Spiked Sample Result} \\ SR = \text{Sample Result} \\ SA = \text{Spike Added (Concentration)}$$

181.3.1





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**Volatile Organics**  
 EPA 601/602/8010/8020

ES Job No.: AT077  
 Client : ES Atlanta/Volk AFB  
 Attn : Dan Lane  
 Address : 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

QC Report No.: VGC-W-0020-88  
 Date Reported: 5/12/88  
 Date Analyzed: 3/17/88  
 Laboratory Supervisor Approval:



Lab Sample Nos.:

	Halocarbons 601/8010	Aromatics 602/8020
Spike Duplicate	88030540	88030540
Spike	88030540	88030540

Sample Matrix:  
 Soil (ug/Kg)

QC Report for Samples: 88030537-0542, 88030551-0554

Compound	Blank	Duplicates			Spike Recovery				ES QC Limits*	
		C1	C2	RPD	SA	SR	SSR	PR	RPD	%Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	9.8	10.4	6	10	ND	9.8	98	56	44-156
Trichloroethene	ND	9.9	10.8	9	10	ND	9.9	99	38	62-138
Chlorobenzene	ND	10.5	11.0	5	10	ND	10.5	105	44	56-144
Aromatics: 602/8020										
Benzene	ND	14.8	14.7	1	10	4.9	14.8	99	45	55-145
Toluene	ND	11.1	10.5	6	10	0.50	11.1	106	41	58-142
Chlorobenzene	ND	12.6	13.6	8	10	ND	12.6	126	34	67-133

\* Asterisked values are outside of ES QC limits.  
 ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Spike Sample  
 C2 = Duplicate Spike Sample

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

Engineering-Science      QUALITY CONTROL RESULTS SUMMARY      Page 1 of 1  
   Volatile Organics  
   EPA 601/602/8010/8020

ES Job No.: AT077  
Client : ES Atlanta/Volk AFB  
Attn : Dan Lane  
Address : 57 Executive Park South,  
          N.E., Suite 590  
          Atlanta, GA 30329

QC Report No.: VGC-W-0021-88  
Date Reported: 5/12/88  
Date Analyzed: 3/21/88  
Laboratory Supervisor Approval:



## Lab Sample Nos.:

	<u>Halocarbons 601/8010</u>	<u>Aromatics 602/8020</u>
Spike Duplicate	88030558	88030558
Spike	88030558	88030558

Sample Matrix:  
Soil (ug/Kg)

QC Report for Samples: 88030555-0563, 88030565

Compound	Blank	Duplicates			Spike Recovery				ES QC Limits*		
		C1	C2	RPD	SA	SR	SSR	PR	RPD	%Recovery	
Halocarbons: 601/8010											
1,1-dichloroethane	ND	10.3	10.6	3	10	ND	10.3	103	56	44-156	
Trichloroethene	ND	10.4	10.5	1	10	ND	10.4	104	38	62-138	
Chlorobenzene	ND	10.4	10.5	1	10	ND	10.4	104	44	56-144	
Aromatics: 602/8020											
Benzene	ND	10.2	10.3	1	10	ND	10.2	102	45	55-145	
Toluene	ND	10.1	10.4	3	10	ND	10.1	101	41	58-142	
Chlorobenzene	ND	9.9	9.9	0	10	ND	9.9	99	34	67-133	

\* Asterisked values are outside of ES QC limits.

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Spike Sample  
C2 = Duplicate Spike Sample

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

Engineering-Science      QUALITY CONTROL RESULTS SUMMARY      Page 1 of 1  
 Volatile Organics  
 EPA 601/602/8010/8020

ES Job No.: AT077  
 Client : ES Atlanta/Volk AFB  
 Attn : Dan Lane  
 Address : 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

QC Report No.: VGC-W-0022-88  
 Date Reported: 5/12/88  
 Date Analyzed: 3/21/88  
 Laboratory Supervisor Approval:



Lab Sample Nos.:

	<u>Halocarbons 601/8010</u>	<u>Aromatics 602/8020</u>
Spike Duplicate	88030566	88030566
Spike	88030566	88030566

Sample Matrix:  
 Soil (ug/Kg)

QC Report for Samples: 88030566-0568, 88030570, 88030574, 88030576-0577

Compound	Blank	Duplicates			Spike Recovery				ES QC Limits*	
		C1	C2	RPD	SA	SR	SSR	PR	RPD	%Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	10.6	10.9	3	10	ND	10.6	106	56	44-156
Trichloroethene	ND	11.2	10.2	9	10	ND	11.2	112	38	62-138
Chlorobenzene	ND	10.4	11.4	9	10	ND	10.4	104	44	56-144
Aromatics: 602/8020										
Benzene	ND	10.0	11.0	10	10	1.2	10.0	88	45	55-145
Toluene	ND	14.8	16.3	10	10	6.0	14.8	88	41	58-142
Chlorobenzene	ND	10.6	11.3	6	10	ND	10.6	106	34	67-133

\* Asterisked values are outside of ES QC limits.

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

Relative Percent Difference (RPD) =  $\frac{C1 - C2}{(C1 + C2)/2} \times 100$       C1 = Spike Sample  
 C2 = Duplicate Spike Sample

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$       SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY  
VOLATILE ORGANICS  
EPA 601/602/8010/8020

ES Job No.: AT077  
Client: ES Atlanta/Volk field AFB  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Lab Sample No.: VGC-W-0024-88  
Date Reported: 5-23-88  
Date Analyzed: 3-23-88  
Laboratory Supervisor Approval:

*RWB*

	<u>Halocarbons 601/8010</u>	<u>Aromatics 602/8020</u>
Spike Duplicate	NA	88030573
Spike	NA	88030573

Sample Matrix: Water (ug/L) Dilution: 25

QC Report for Samples: 88030569, 88030572-0573, 88030575

Compound	Blank	Duplicates			Spike Recovery				ES QC Limits	
		C1	C2	RPD	SA	SR	SSR	PR	RPD	% Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	NA	NA	NA	NA	ND	NA	NA	56	44-156
Trichloroethene	ND	NA	NA	NA	NA	ND	NA	NA	38	62-138
Chlorobenzene	ND	NA	NA	NA	NA	ND	NA	NA	44	56-144
Aromatics: 602/8020										
Benzene	ND	404	384	5	250	29	404	150*	45	55-145
Toluene	ND	296	285	4	250	40	296	102	41	58-142
Chlorobenzene	ND	198	118	51*	250	ND	198	79	34	67-133

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit.

\* Asterisked values are outside of ES QC limits. Xylenes interferences encountered in the aromatics determination.

Relative Percent Difference (RPD) =  $\frac{C1 - C2}{(C1 + C2)/2} \times 100$  C1 = Spike Sample  
C2 = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$  SSR = Spiked Sample Result  
SA = Spike Added (Concentration)  
SR = Sample Result



Engineering-Science      **QUALITY CONTROL RESULTS SUMMARY**  
**Volatile Organics**  
 EPA 601/602/8010/8020

ES Job No.: AT064  
 Client : ES Atlanta/Volk AFB  
 Attn : Jimmy Duncan  
 Address : 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

QC Report No.: VGC-S-0006-88  
 Date Reported: 4-06-88  
 Date Analyzed: 2-08-88  
 Laboratory Supervisor Approval:

*[Signature]*

	<u>Halocarbons 601/8010</u>	<u>Aromatics 602/8020</u>
Spike Duplicate	88010186	88010186
Spike	88010186	88010186

Sample Matrix:  
 Soil (ug/Kg)

QC Report for Samples: 88010186-0193, 88010195-0196

Compound	Blank	Duplicates			Spike Recovery				ES QC Limits	
		C1	C2	RPD	SA	SR	SSR	PR	RPD	%Recovery
Halocarbons: 601/8010										
1,1-dichloroethane	ND	9.1	8.3	9	10	ND	9.1	91	56	44-156
Trichloroethene	ND	9.6	9.2	4	10	ND	9.6	96	38	62-138
Chlorobenzene	ND	10.6	10.7	1	10	ND	10.6	106	44	56-144
Aromatics: 602/8020										
Benzene	ND	10.2	9.6	6	10	ND	10.2	102	45	55-145
Toluene	ND	9.2	8.8	4	10	ND	9.2	92	41	58-142
Chlorobenzene	ND	10.0	9.9	1	10	ND	10.0	100	34	67-133

ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limit

\* Asterisked values are outside of ES QC limits.

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Spike Sample  
 C2 = Duplicate Spike Sample

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)









Engineering-Science      **QUALITY CONTROL RESULTS SUMMARY**      Page 1 of 1  
**Volatile Organics**  
 EPA 601/602/8010/8020

ES Job No.: AT077  
 Client : ES Atlanta/Volk APB  
 Attn : Dan Lane  
 Address : 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

QC Report No.: VGC-S-0010-88  
 Date Reported: 5/11/88  
 Date Analyzed: 2/18/88  
 Laboratory Supervisor Approval:



Lab Sample Nos.:

	<u>Halocarbons 601/8010</u>	<u>Aromatics 602/8020</u>
Spike Duplicates	88020299	88020299
Spike	88020299	88020299

Sample Matrix:  
 Soil (ug/Kg)

QC Report for Sample: 88020299-0300, 88020371-0378

Compound	Blank	Duplicates			Spike Recovery				ES QC Limits*	
		C1	C2	RPD	SA	SR	SSR	PR	RPD	% Recovery
<b>Halocarbons: 601/8010</b>										
1,1-dichloroethane	ND	9.4	10.0	6	10	ND	9.4	94	56	44-156
Trichloroethene	ND	9.3	9.3	0	10	ND	9.3	93	38	62-138
Chlorobenzene	ND	9.6	10.1	5	10	ND	9.6	96	44	56-144
<b>Aromatics: 602/8020</b>										
Benzene	ND	9.9	9.6	3	10	ND	9.9	99	45	55-145
Toluene	ND	10.0	9.6	4	10	ND	10.0	100	41	58-142
Chlorobenzene	ND	9.9	9.3	6	10	ND	9.9	99	34	67-133

\* Asterisked values are outside of ES QC limits.  
 ND = Not detectable at instrumental detection limits. Aqueous standards were used to determine detection limits.

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Spike Sample  
 C2 = Duplicate Spike Sample

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

SURROGATE PERCENT RECOVERY  
SOIL  
DATE REPORTED: 9-26-88

Job No.: AT077

Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*RWB*

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (14-158)	a-a-a-trifluorotoluene (7-187)
88010186	113	82
88010187	80	100
88010188	103	113
88010189	109	96
88010190	74	105
88010191	96	101
88010192	104	112
88010193	96	105
88010194	90	102
88010195	92	79
88010196	101	123
88010197	104	110
88010198	94	77
88010199	90	119
88010204	82	100
88010205	101	104
88010206	99	98
88010207	88	95
88010208	102	90
88010209	97	108
88010210	91	116
88010211	96	95
88010212	85	82
88010214	83	89
88010215	122	106
88010216	106	103
88010217	99	111
88010218	101	114
88010219	113	108
88010220	107	128

\* Asterisked values are outside of ES Laboratory limits.  
EPA has not established percent recovery limits for these compounds.

SURROGATE PERCENT RECOVERY  
SOIL  
DATE REPORTED: 9-29-88

Job No.: AT077

Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*R. W. Bunker*

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (14-158)	a-a-a-trifluorotoluene (7-187)
88010186 MS	100	187
88010186 MSD	103	149
88010194 MS	97	49
88010194 MSD	104	197*
88010210 MS	98	61
88010210 MSD	106	70
88020289 MS	98	102
88020289 MSD	97	95
88020299 MS	101	100
88020299 MSD	100	94
88020383 MS	93	91
88020383 MSD	96	90


\* Asterisked values are outside of ES Laboratory limits.  
EPA has not established percent recovery limits for these compounds.

SURROGATE PERCENT RECOVERY  
SOIL  
DATE REPORTED: 9-26-88

Job No.: AT077

Client: ES Atlanta  
Attention: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

  
\_\_\_\_\_

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (14-158)	a-a-a-trifluorotoluene (7-187)
88020289	99	81
88020290	97	97
88020291	109	100
88020292	98	93
88020293	114	104
88020294	112	106
88020295	93	94
88020296	108	102
88020297	102	90
88020298	95	97
88020299	95	83
88020300	95	101
88020371	93	100
88020372	89	100
88020373	96	101
88020374	110	120
88020375	98	102
88020376	108	93
88020377	108	89
88020378	87	88
88020383	102	90
88020384	105	93
88020385	112	98

\* Asterisked values are outside of ES Laboratory limits.  
EPA has not established percent recovery limits for these compounds.

SURROGATE PERCENT RECOVERY  
WATER  
DATE REPORTED: 9-29-88

Job No.: AT077

Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*RWBurton*

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (61-145)	a-a-a-trifluorotoluene (43-181)
88030522	92	86
88030522 MS	95	109
88030522 MSD	96	113
88030523	99	103
88030527	85	135
88030528	85	81
88030529	94	104
88030530	78	79
88030531	79	83
88030532	91	91
88030533	95	97
88030536	97	93
88030537	102	111
88030538	74	74
88030539	81	72
88030540	92	104
88030540 MS	103	112
88030540 MSD	110	109
88030541	100	122
88030542	88	101
88030551	74	110
88030552	82	110
88030553	100	97
88030554	80	85
88030576	94	83
88030577	89	104
88030573 MS	NA	144
88030573 MSD	NA	123

\* Asterisked values are outside of ES Laboratory limits.  
EPA has not established percent recovery limits for these compounds.

NA = Not Analyzed

SURROGATE PERCENT RECOVERY  
WATER  
DATE REPORTED: 9-29-88

Job No.: AT077

Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*ANN Burt*

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (61-145)	a-a-a-trifluorotoluene (43-181)
88030555	106	96
88030556	90	83
88030557	88	84
88030558	86	88
88030558 MS	101	90
88030558 MSD	95	105
88030559	83	81
88030560	100	113
88030561	109	103
88030562	89	102
88030563	86	98
88030565	107	101
88030566	124	121
88030566 MS	97	105
88030566 MSD	102	115
88030567	106	68
88030568	110	116
88030569	83	98
88030570	113	125
88030572	86	100
88030573	112	125
88030574	85	95
88030575	96	102
88030561 MS	96	NA
88030561 MSD	69	NA

\* Asterisked values are outside of ES Laboratory limits.  
EPA has not established percent recovery limits for these compounds.

NA = Not Analyzed



SURROGATE PERCENT RECOVERY  
WATER  
DATE REPORTED: 9-26-88

Job No.: AT077

Client: ES Atlanta  
Attention: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*DWB*

Project: Volk Field AFB

Sample Nos.	1-chloro-2-bromopropane (61-145)	a-a-a-trifluorotoluene (43-181)
88071335	98	95
88071336	111	105
88071337	114	97
88071338	107	92
88071335 MS	74	81
88071335 MSD	65	109

\* Asterisked values are outside of ES Laboratory limits.  
EPA has not established percent recovery limits for these compounds.

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: WATER

Client: ES Atlanta/Volk AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-W-0020-88  
 Date Reported: 5/12/88  
 Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88030536-0540

UNIT: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE	CONC.	%	CONC.	%	EPA QC LIMITS*		
		ADDED	RESULT	MS	REC	MSD	REC	RPD		
								RPD		
								RECOVERY		
	1,2,4-Trichlorobenzene	100	ND**	72.0	72	71.5	72	1	28	39-98
B/N	Acenaphthene	100	ND	78.4	78	79.0	79	1	31	46-118
SMO	2,4-Dinitrotoluene	100	ND	75.7	76	76.8	77	1	38	24-96
SAMPLE NO	Pyrene	100	ND	120	120	114	114	5	31	26-127
	N-Nitroso Di-n-Propylamine	100	ND	75.8	76	74.7	75	1	38	41-116
88030536	1,4-Dichlorobenzene	100	ND	70.3	70	71.0	71	1	28	36-97
ACID	Pentachlorophenol	200	ND	186	93	134	67	32	50	9-103
SMO	Phenol	200	ND	70.6	35	47	24	40	42	12-89
SAMPLE NO	2-Chlorophenol	200	ND	148	74	107	54	32	40	27-123
	4-Chloro-3-Methylphenol	200	ND	154	77	113	56	31	42	23-97
88030536	4-Nitrophenol	200	ND	78.2	39	47	24	50	50	10-80

Date analyzed: 3/24/88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88030536-0540

Date analyzed: 3/29/88

Compound	Quantity
Bis(2-ethylhexyl)phthalate	5.29

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: WATER

Client: ES Atlanta/Volk AFB  
 Contact: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT064  
 QC Report No.: BNA-W-0021-88  
 Date Reported: 4-28-88  
 Laboratory Supervisor Approval:

*[Handwritten Signature]*

Report for Samples: 88030513, 88030522, 88030527-0531, 88030533

NIT: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE ADDED	SAMPLE RESULT	CONC. MS	% REC MSD	CONC. REC RPD	% RPD	EPA QC LIMITS	RECOVERY
	:1,2,4-Trichlorobenzene	100	ND	33.3:33*	33.1: 33	1	28	39-98	
E/N	:Acenaphthene	100	ND	35.3:35*	36.1:36*	2	31	46-118	
SMO	:2,4-Dinitrotoluene	100	ND	38.4:38	40.0:40	4	38	24-96	
SAMPLE NO	:Pyrene	100	ND	22.9:23*	25.7:26	12	31	26-127	
	:N-Nitroso Di-n-Propylamine	100	ND	36.8:37*	41.6:42	12	38	41-116	
88030531	:1,4-Dichlorobenzene	100	ND	34.2:34*	35.2:35*	3	28	36-97	
ACID	:Pentachlorophenol	200	ND	55.5:28	65.4:33	16	50	9-103	
SMO	:Phenol	200	ND	27.8:14	27.8:14	0	42	12-89	
SAMPLE NO	:2-Chlorophenol	200	ND	50.5:25*	50.6:25*	0	40	27-123	
	:4-Chloro-3-Methylphenol	200	ND	39.2:20*	38.9:19*	1	42	23-97	
88030531	:4-Nitrophenol	200	ND	44.7:22	50.4:25	12	50	10-80	

Date analyzed: 3-15-88

Asterisked values are outside of EPA QC limits. Insufficient sample available for reextraction.  
 A laboratory control sample showed the laboratory analysis is within control.

\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88030513, 88030522, 88030527-0531, 88030533  
 Date analyzed: 3-14-88

Compound	Quantity
Diethyl phthalate	39.5
Bis(2-ethyl hexyl)phthalate	2.1

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
EPA METHOD 625/8270  
MATRIX: WATER

Job No.: AT077

Client: ES Atlanta/Volk field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South  
N. E., Suite 590  
Atlanta, Ga. 30329

QC Report No.: BNA-W-0023-88  
Date Reported: 5-16-88  
Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88030568,  
88030572-88030576

Unit: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

Fraction	Compound	Conc. SA	Sample Result	Conc. MS	% REC	Conc MSD	% REC	RPD	EPA RPD	QC Limi RECOVER
	1,2,4-Trichlorobenzene	100	ND	52.4	52	43.7	44	17	28	39-98
B/N	Acenaphthene	100	ND	56.1	56	52.4	52	7	31	46-118
SMO	2,4-Dinitrotoluene	100	ND	54.9	55	45.6	46	18	38	24-96
SAMPLE #	Pyrene	100	ND	45.7	46	48.2	48	4	31	26-127
	N-Nitroso Di-n-Propylamine	100	ND	53.5	54	45.9	46	16	38	41-116
88030568	1,4-Dichlorobenzene	100	ND	51.4	51	44.3	44	15	28	36-97
ACID	Pentachlorophenol	200	ND	57.6	29	82.9	41	36	50	9-103
SMO	Phenol	200	ND	76.9	38	58.2	29	28	42	12-89
SAMPLE #	2-Chlorophenol	200	ND	117	59	100	50	16	40	27-123
	4-Chloro-3-Methylphenol	200	ND	120	60	65.9	33	58*	42	23-97
88030568	4-Nitrophenol	200	ND	74.5	37	79.6	40	7	50	10-80

Date analyzed: 4-14-88

\* Asterisked values are outside of EPA QC limits. 4-Chloro-3-methylphenol relative percent difference is outside the EPA range. Analysis of method blank spikes showed the laboratory to be in control.

\*\* ND = Not detected

BLANK SUMMARY

Blank Summary for Samples: 88030568, 88030572-0576 Date analyzed: 4-14-88

Compound: Bis (2-ethylhexyl)phthalate  
Quantity: 6.3

NOTE: ALL SAMPLE RESULTS ARE BLANK SUBTRACTED

QUALITY CONTROL REPORT  
EPA METHOD 625/8270  
MATRIX: WATER

Job No.: AT077

Client: ES Atlanta/Volk field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

QC Report No.: BNA-W-0024-88  
Date Reported: 5-16-88  
Laboratory Supervisor Approval:

*D. W. Benton*

QC Report for Samples: 88030561-88030562, 88030564-88030567,  
88030569

Unit: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

Reaction	Compound	Conc. SA	Sample Result	Conc. MS	% Conc		% RPD		EPA QC Limits	
					REC	MSD	REC	RPD	RPD	RECOVERY
	1,2,4-Trichloro-benzene	100	ND	51.3	51	49.9	50	3	28	39-98
B/N	Acenaphthene	100	ND	55.3	55	55.8	56	1	31	46-118
S/MO	2,4-Dinitrotoluene	100	ND	54.1	54	57.4	57	6	38	24-96
SAMPLE #	Pyrene	100	ND	51.0	51	48.6	49	5	31	26-127
	N-Nitroso Di-n-Propylamine	100	ND	51.3	51	51.6	52	1	38	41-116
88030566	1,4-Dichlorobenzene	100	ND	51.1	51	48.4	48	5	28	36-97
ACID	Pentachlorophenol	200	ND	85.4	43	83.9	42	2	50	9-103
S/MO	Phenol	200	ND	41.1	21	36.1	18	13	42	12-89
SAMPLE #	2-Chlorophenol	200	ND	63.9	32	56.3	28	13	40	27-123
	4-Chloro-3-Methylphenol	200	ND	49.2	25	46.1	23	7	42	23-97
88030566	4-Nitrophenol	200	ND	62.0	31	60.5	30	2	50	10-80

Date analyzed: 4/8/88

Asterisked values are outside of EPA QC limits.

ND = Not detected

BLANK SUMMARY

Blank Summary for Samples: 88030561-0562, 88030564-0567, 88030569

Date analysed: 4/8/88

Compound  
None detected

Quantity  
---

NOTE: ALL SAMPLE RESULTS ARE BLANK SUBTRACTED

**QUALITY CONTROL REPORT  
EPA METHOD 625/8270  
MATRIX: WATER**

Job No.: AT077

Client: ES Atlanta/Volk field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South  
N. E., Suite 590  
Atlanta, Ga. 30329

QC Report No.: BNA-W-0025-88  
Date Reported: 5-16-88  
Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88030551-88030560

Unit: ug/L

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

Fraction	Compound	Conc. SA	Sample Result	Conc. MS	% REC	Conc MSD	% REC	RPD	EPA QC Limit RPD RECOVERY
B/N SMO SAMPLE #	1,2,4-Trichlorobenzene	100	ND	60.9	61	46.1	46	28	28 39-98
	Acenaphthene	100	ND	74.1	74	55.6	56	28	31 46-11
	2,4-Dinitrotoluene	100	ND	73.6	74	61.4	61	19	38 24-96
	Pyrene	100	ND	49.9	50	46.5	46	8	31 26-12
	N-Nitroso Di-n-Propylamine	100	ND	71.4	71	50.1	50	35	38 41-11
88030555	1,4-Dichlorobenzene	100	ND	63.2	63	43.2	43	38*	28 36-97
ACID SMO SAMPLE #	Pentachlorophenol	200	ND	198	99	181	91	9	50 9-10
	Phenol	200	ND	91.4	46	66.1	33	32	42 12-89
	2-Chlorophenol	200	ND	147	74	103	51	35	40 27-12
	4-Chloro-3-Methylphenol	200	ND	128	64	129	65	1	42 23-97
88030555	4-Nitrophenol	200	ND	117	59	113	57	3	50 10-80

Date analyzed: 4-8-88

\* Asterisked values are outside of EPA QC limits. Matrix effects caused the relative percent deviation for 1,4-dichlorobenzene to be higher than EPA recommended guidelines. Analysis of spiked blanks showed the laboratory to be in control.

\*\* ND = Not detected

BLANK SUMMARY

Blank Summary for Samples: 88030551-88030560

Date analyzed: 3-17-88

Compound	Quantity
Bis (2-ethylhexyl) phthalate	3

NOTE: ALL SAMPLE RESULTS ARE BLANK SUBTRACTED

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
WATER

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

Project: Volk Field AFB *[Signature]*

Sample No.	Nitro- benzene-d5 35-114	2-Fluoro- biphenyl 43-116	4,4'-Dibromo- biphenyl 33-141	phenol-d5 10-94	2-Fluoro- phenol 21-100	2,4,6-Tribromo- phenol 10-123
88030513	52	51	57	23	33	47
88030522	41	41	43	25	37	44
88030527	42	42	40	26	37	38
88030528	51	53	51	17	26	40
88030529	52	53	57	20	31	39
88030530	43	44	40	10	15 *	26
88030531	38	43	34	7 *	9 *	21
88030533	30 *	31	34	22	25	30
88030531 MS	29 *	30 *	30	39	41 *	42
88030531 MSD	39	41 *	42	14	16 *	27
Blank	55	55	68	22	29	51
Blank MS	72	73	93	48	51	87
Blank MSD	67	69	80	68	66	100
88030536	52	60	81	22	33	60
88030537	53	53	56	22	33	71
88030538	55	61	61	19	33	52
88030539	76	75	97	29	45	67
88030540	82	82	83	35	38	52
88030536 MS	84	81	101	29	46	71
88030536 MSD	81	86	108	22	34	55
Blank	75	78	92	20	33	52

\* Values are outside EPA QC limits.

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
WATER

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

Project: Volk Field AFB *[Signature]*

Sample No.	Nitro- benzene-d5 35-114	2-Fluoro- biphenyl 43-116	4,4'-Dibromo- biphenyl 33-141	phenol-d5 10-94	2-Fluoro- phenol 21-100	2,4,6-Tribromo- phenol 10-123
88030551	49	58	92	28	38	53
88030552	49	51	87	12	9 *	22
88030553	9 *	9 *	15 *	8 *	8 *	22
88030553 R	9 *	9 *	14 *	8 *	7 *	20
88030554	11 *	23 *	20	31	40	67
88030554 R	26 *	23 *	18	31	40	67
88030555	50	54	99	0 *	0 *	410 *
88030555 R	50	54	99	33	35	36
88030556	60	64	70	32	43	66
88030557	59	60	72	22	29	46
88030558	42	45	58	19	25	38
88030559	52	53	59	21	29	51
88030560	36	41 *	65	15	20 *	48
88030560 R	38	42 *	66	15	21	39
88030555 MS	50	50	99	31	37	59
88030555 MSD	68	73	109	47	54	68
Blank	58	52	93	21	33	60

\* Values are outside EPA QC limits.  
R Re-extracted sample results.



SEMIVOLATILE SURROGATE PERCENT RECOVERY  
WATER

Job No.: AT077

Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*[Signature]*

Project: Volk Field AFB

Sample No.	Nitro- benzene-d5 35-114	2-Fluoro- biphenyl 43-116	4,4'-Dibromo- biphenyl 33-141	phenol-d5 10-94	2-Fluoro- phenol 21-100	2,4,6-Tribromo- phenol 10-123
88030561	42	44	54	14	19 *	37
88030562	71	65	95	20	29	50
88030565	74	71	76	25	37	56
88030566	54	55	63	17	15 *	26
88030567	88	84	85	16	18 *	30
88030568	60	65	70	28	25	35
88030569	8 *	26 *	15 *	36	49	116
88030569 R	3 *	26 *	15 *	34	46	102
88030572	8 *	30 *	11 *	23	25	41
88030572 R	11 *	17 *	9 *	22	52	54
88030566 MS	57	55	62	19	16 *	26
88030566 MSD	56	56	68	17	17 *	28
88030568 MS	55	59	61	34	37	45
88030568 MSD	46	54	70	28	30	34
Blank	49	50	69	20	28	46
88030573	66	37 *	12 *	26	34	78
88030574	82	73	70	25	37	59
88030575	69	57	32	32	43	80
88030576	58	55	30	24	33	52
88030573 R	64	56	23	22	52	54

\* Values are outside EPA QC limits.  
R Re-extracted sample results.

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk Field AFB  
 Attn: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0011Re-88  
 Date Reported: 3/15/88  
 Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88010186 - 88010195

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION :	COMPOUND	:CONC. SPIKE	:SAMPLE:CONC.:	%	:CONC.:	%	:	EPA QC LIMITS*
:	:	ADDED	RESULT:	MS	REC:	MSD	REC:	RPD
:	:	:	MS	REC:	MSD	REC:	RPD	RECOVERY
	:1,2,4-Trichlorobenzene	: 3.33	: ND**:	1.84:	55:	1.92:	58:	4: 23 : 38-107
B/N	:Acenaphthene	: 3.33	: ND :	1.94:	58:	1.98:	59:	2: 19 : 31-137
SMO	:2,4-Dinitrotoluene	: 3.33	: ND :	2.80:	84:	2.74:	82:	2: 47 : 28-89
SAMPLE NO	:Pyrene	: 3.33	: ND :	1.84:	55:	1.79:	54:	3: 36 : 35-142
	:N-Nitroso Di-n-Propylamine	: 3.33	: ND :	2.38:	71:	2.26:	68:	5: 38 : 41-126
88010186Re:	:1,4-Dichlorobenzene	: 3.33	: ND :	1.93:	58:	1.94:	58:	1: 27 : 28-104
ACID	:Pentachlorophenol	: 6.67	: ND :	4.87:	73:	4.77:	72:	2: 47 : 17-109
SMO	:Phenol	: 6.67	: ND :	4.20:	63:	4.17:	62:	1: 35 : 26-90
SAMPLE NO	:2-Chlorophenol	: 6.67	: ND :	3.93:	59:	4.10:	61:	4: 50 : 25-102
	:4-Chloro-3-Methylphenol	: 6.67	: ND :	4.63:	69:	4.77:	72:	3: 33 : 26-103
88010186Re:	:4-Nitrophenol	: 6.67	: ND :	5.33:	80:	5.27:	79:	1: 50 : 11-114

Date analyzed: 2-29-88

Asterisked values are outside of EPA QC limits

\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010186 - 88010195

Date analyzed: 2-29-88

Compound

Quantity

None Found

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk Field AFB  
 Attn: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0011-88  
 Date Reported: 3/15/88  
 Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88010186 - 88010195

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION :	COMPOUND	:CONC. SPIKE	:SAMPLE:CONC.:	%	:CONC.:	%	:	EPA QC LIMITS*
:	:	ADDED	RESULT: MS	REC:	MSD	REC:	RPD:	RPD : RECOVERY
	:1,2,4-Trichlorobenzene	3.33	ND**:	1.82:	55:	2.45:	74:30*:	23 : 38-107
B/N	:Acenaphthene	3.33	ND :	1.79:	54:	2.28:	68:24*:	19 : 31-137
SMO	:2,4-Dinitrotoluene	3.33	ND :	2.18:	65:	2.43:	73:11 :	47 : 28-89
SAMPLE NO	:Pyrene	3.33	ND :	1.54:	46:	1.83:	55:17 :	36 : 35-142
	:N-Nitroso Di-n-Propylamine	3.33	ND :	1.80:	54:	2.35:	71:27 :	38 : 41-126
88010186	:1,4-Dichlorobenzene	3.33	ND :	1.59:	48:	2.24:	67:34*:	27 : 28-104
ACID	:Pentachlorophenol	6.67	ND :	5.27:	79:	6.10:	91:15 :	15 : 17-109
SMO	:Phenol	6.67	ND :	3.11:	47:	3.90:	58:23 :	23 : 26-90
SAMPLE NO	:2-Chlorophenol	6.67	ND :	2.90:	43:	3.90:	58:29 :	29 : 25-102
	:4-Chloro-3-Methylphenol	6.67	ND :	4.23:	63:	4.93:	74:15 :	15 : 26-103
88010186	:4-Nitrophenol	6.67	ND :	4.83:	72:	5.23:	78: 8 :	8 : 11-114

Date analyzed: 2-08-88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

The quality control set was reextracted and reanalyzed; relative percent differences are within the EPA recommended criteria. Please see QC report number BNA-S-0011Re-88.

BLANK SUMMARY

Blank Summary for Samples: 88010186 - 88010195

Date analyzed: 2-08-88

<u>Compound</u>	<u>Quantity</u>
Di-n-butyl phthalate	3.97
Bis(2-ethyl hexyl)phthalate	1.1

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk Field AFB  
 Attn: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0012Re-88  
 Date Reported: 3/15/88  
 Laboratory Supervisor Approval:

QC Report for Samples: 88010196 - 88010199

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE	CONC.	%	CONC.	%	EPA QC LIMITS*		
		ADDED	RESULT	MS	REC	MSD	REC	RPD		
								RPD		
								RECOVERY		
	1,2,4-Trichlorobenzene	3.33	ND**	2.22	67	2.01	60	10	23	38-107
B/N	Acenaphthene	3.33	ND	2.04	61	1.93	58	6	19	31-137
S/MO	2,4-Dinitrotoluene	3.33	ND	2.46	74	2.56	77	4	47	28-89
SAMPLE NO	Pyrene	3.33	ND	2.17	65	2.43	73	11	36	35-142
	N-Nitroso Di-n-Propylamine	3.33	ND	2.38	71	2.38	71	0	38	41-126
88010196Re	1,4-Dichlorobenzene	3.33	ND	2.17	65	2.07	62	5	27	28-104
ACID	Pentachlorophenol	6.67	ND	4.67	70	4.77	72	2	47	17-109
S/MO	Phenol	6.67	ND	4.37	66	3.63	54	18	35	26-90
SAMPLE NO	2-Chlorophenol	6.67	ND	4.17	62	3.77	56	10	50	25-102
	4-Chloro-3-Methylphenol	6.67	ND	4.20	63	3.13	42	29	33	26-103
88010196Re	4-Nitrophenol	6.67	ND	4.60	69	4.57	68	1	50	11-114

Date analyzed: 2-29-88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010196 - 88010199

Date analyzed: 2-29-88

<u>Compound</u>	<u>Quantity</u>
None Found	

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL  
 Revised Report - 3-30-88

Client: ES Atlanta/Volk Field AFB  
 Contact: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0012-88  
 Date Reported: 3/15/88  
 Laboratory Supervisor Approval:

*[Signature]*

Report for Samples: 88010196 - 88010199

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE	CONC. %	CONC. %	EPA QC LIMITS*
		ADDED	RESULT: MS	REC: MSD	REC: RPD	RPD: RECOVERY
	1,2,4-Trichlorobenzene	3.33	ND**	2.09: 63	1.85: 56	12: 23 : 38-107
B/N	Acenaphthene	3.33	ND	1.80: 54	1.76: 53	2: 19 : 31-137
S/MO	2,4-Dinitrotoluene	3.33	ND	2.22: 67	2.16: 65	3: 47 : 28-89
SAMPLE NO	Pyrene	3.33	ND	1.46: 44	1.50: 45	3: 36 : 35-142
	N-Nitroso Di-n-Propylamine	3.33	ND	2.99: 90	1.88: 56	46*: 38 : 41-126
88010196	1,4-Dichlorobenzene	3.33	ND	1.91: 57	1.75: 53	9: 27 : 28-104
ACID	Pentachlorophenol	6.67	ND	6.07: 91	3.47: 82	55*: 47 : 17-109
S/MO	Phenol	6.67	ND	3.20: 48	3.07: 46	4: 35 : 26-90
SAMPLE NO	2-Chlorophenol	6.67	ND	3.57: 54	3.02: 45	17: 50 : 25-102
	4-Chloro-3-Methylphenol	6.67	ND	4.13: 62	3.83: 57	8: 33 : 26-103
88010196	4-Nitrophenol	6.67	ND	5.20: 78	4.43: 66	16: 50 : 11-114

Date analyzed: 2-09-88

Asterisked values are outside of EPA QC limits

\* ND = Not Detected

The quality control set was reextracted and reanalyzed; relative percent differences are within the EPA criteria. Please see QC report number BNA-S-0012Re-88.

BLANK SUMMARY

Blank Summary for Samples: 88010196 - 88010199

Date analyzed: 2-08-88

Compound	Quantity
Di-n-butyl phthalate	3.97
Bis(2-ethyl hexyl)phthalate	1.1

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk Field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0013-88  
 Date Reported: 3/15/88  
 Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88010211 - 88010220

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE	CONC. %	CONC. %	EPA QC LIMITS*
		ADDED	RESULT	MS	REC MSD	REC RPD
	1,2,4-Trichlorobenzene	3.33	ND**	2.09	63: 2.24	67: 7: 23
B/N	Acenaphthene	3.33	ND	2.11	63: 2.06	62: 2: 19
SMO	2,4-Dinitrotoluene	3.33	ND	2.51	75: 2.63	79: 5: 47
SAMPLE NO	Pyrene	3.33	ND	2.28	68: 2.19	66: 4: 36
	N-Nitroso Di-n-Propylamine	3.33	ND	1.92	58: 2.13	64: 10: 38
88010220	1,4-Dichlorobenzene	3.33	ND	2.03	61: 2.12	64: 4: 27
ACID	Pentachlorophenol	6.67	ND	4.73	71: 4.87	73: 3: 47
SMO	Phenol	6.67	ND	3.53	53: 3.37	50: 5: 35
SAMPLE NO	2-Chlorophenol	6.67	ND	3.67	55: 3.87	58: 5: 50
	4-Chloro-3-Methylphenol	6.67	ND	3.70	55: 3.24	49: 13: 33
88010220	4-Nitrophenol	6.67	ND	4.63	69: 5.33	80: 14: 50

Date analyzed: 3-01-88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010211 - 88010220

Date analyzed: 2-19-88

<u>Compound</u>	<u>Quantity</u>
None Found	-----

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

174.3.1

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0016-88  
 Date Reported: 5/11/88  
 Laboratory Supervisor Approval:

*ALW Benton*

QC Report for Samples: 88010204-0210

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE:CONC.:	%	CONC.:	%	EPA QC LIMITS*
		ADDED	RESULT: MS	REC: MSD	REC: RPD	RPD	RECOVERY
	1,2,4-Trichlorobenzene	3.33	ND**	2.26	68	2.13	64 : 6 : 23 : 38-107
B/N	Acenaphthene	3.33	ND	2.00	60	2.04	61 : 2 : 19 : 31-137
SMO	2,4-Dinitrotoluene	3.33	ND	2.35	70	2.38	72 : 2 : 47 : 28-89
SAMPLE NO	Pyrene	3.33	ND	1.54	46	1.60	48 : 8 : 36 : 35-142
	N-Nitroso Di-n-Propylamine	3.33	ND	2.10	63	1.87	56 : 11 : 38 : 41-126
88010204	1,4-Dichlorobenzene	3.33	ND	2.08	62	1.83	55 : 13 : 27 : 28-104
ACID	Pentachlorophenol	6.67	ND	4.47	67	4.87	73 : 8 : 47 : 17-109
SMO	Phenol	6.67	ND	3.93	59	3.53	53 : 11 : 35 : 26-90
SAMPLE NO	2-Chlorophenol	6.67	ND	3.47	62	3.40	51 : 2 : 50 : 25-102
	4-Chloro-3-Methylphenol	6.67	ND	3.87	58	4.10	62 : 6 : 33 : 26-103
88010204	4-Nitrophenol	6.67	ND	5.70	86	5.47	82 : 4 : 50 : 11-114

Date analyzed: 2/19/88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010204-0210

Date analyzed: 2/19/88

<u>Compound</u>	<u>Quantity</u>
None detected	—

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0017-88  
 Date Reported: 5/11/88  
 Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88020289-0300

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE ADDED	SAMPLE RESULT	CONC. MS	REC MSD	CONC. REC	RPD	EPA QC LIMITS
				%	%	%		RECOVERY
	1,2,4-Trichlorobenzene	3.33	ND**	2.48	74	2.45	74	1 : 23 : 38-107
B/N	Acenaphthene	3.33	ND	2.54	76	2.51	75	1 : 19 : 31-137
SMO	2,4-Dinitrotoluene	3.33	ND	1.32	40	1.47	44	11 : 47 : 28-89
SAMPLE NO	Pyrene	3.33	ND	4.14	124	4.36	131	5 : 36 : 35-142
	N-Nitroso Di-n-Propylamine	3.33	ND	1.96	59	1.96	59	0 : 38 : 41-126
88020289	1,4-Dichlorobenzene	3.33	ND	2.19	66	2.20	66	0 : 27 : 28-104
ACID	Pentachlorophenol	6.67	ND	5.01	75	5.13	77	2 : 47 : 17-109
SMO	Phenol	6.67	ND	3.27	49	3.31	50	1 : 35 : 26-90
SAMPLE NO	2-Chlorophenol	6.67	ND	3.58	54	3.59	54	0 : 50 : 25-102
	4-Chloro-3-Methylphenol	6.67	ND	2.46	37	2.24	34	9 : 33 : 26-103
88020289	4-Nitrophenol	6.67	ND	5.18	78	4.87	43	6 : 50 : 11-114

Date analyzed: 3/08/88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88020289-0300

Date analyzed: 3/08/88

Compound	Quantity
None detected	----

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED



QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT077  
 QC Report No.: BNA-S-0018-88  
 Date Reported: 4/14/88  
 Laboratory Supervisor Approval:

*RAN Buxton*

QC Report for Samples: 88010211-0212, 88010214-0220

UNIT: mg/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE	CONC.	%	CONC.	%	EPA QC LIMITS*		
		ADDED	RESULT	MS	REC	MSD	REC	RPD		
								RPD		
								RECOVERY		
	1,2,4-Trichlorobenzene	3.33	ND**	2.09	63	2.24	67	7	23	38-107
B/N	Acenaphthene	3.33	ND	2.11	63	2.06	62	2	19	31-137
SMO	2,4-Dinitrotoluene	3.33	ND	2.51	75	2.63	79	5	47	28-89
SAMPLE NO	Pyrene	3.33	ND	2.28	68	2.19	66	4	36	35-142
	N-Nitroso Di-n-Propylamine	3.33	ND	1.92	58	2.13	64	10	38	41-126
88010220	1,4-Dichlorobenzene	3.33	ND	2.03	61	2.12	64	4	27	28-104
ACID	Pentachlorophenol	6.67	ND	4.73	71	4.87	73	3	47	17-109
SMO	Phenol	6.67	ND	3.53	53	3.37	51	5	35	26-90
SAMPLE NO	2-Chlorophenol	6.67	ND	3.87	58	3.87	58	0	50	25-102
	4-Chloro-3-Methylphenol	6.67	ND	3.70	55	3.24	49	13	33	26-103
88010220	4-Nitrophenol	6.67	ND	4.63	69	5.33	80	14	50	11-114

Date analyzed: 3/01/88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88010211-00212, 88010-00214-0220

Date analyzed: 2/19/88

Compound

Quantity

None found

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NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk Field AFB

Job No.: AT064

Attn: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

QC Report No.: BNA-S-0021Re-88  
 Date Reported: 4-28-88  
 Laboratory Supervisor Approval:

*M. B. Burton*

QC Report for Samples: 88020371-0378

UNIT: ug/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

FRACTION	COMPOUND	CONC. SPIKE	SAMPLE	CONC. %	CONC. %	EPA QC LIMITS*
		ADDED	RESULT	MS	REC MSD	REC RPD
	1,2,4-Trichlorobenzene	3330	ND	1900:57	2240:67	16 : 23
B/N	Acenaphthene	3330	ND	2210:66	2380:72	7 : 19
SMO	2,4-Dinitrotoluene	3330	ND	2630:79	2580:78	2 : 47
SAMPLE NO	Pyrene	3330	ND	2660:80	2410:72	10 : 36
	N-Nitroso Di-n-Propylamine	3330	ND	2220:67	2570:77	15 : 38
88020371Re	1,4-Dichlorobenzene	3330	ND	1980:60	2370:71	18 : 27
ACID	Pentachlorophenol	6670	ND	6870:103	6730:101	2 : 47
SMO	Phenol	6670	ND	3990:60	4460:67	11 : 35
SAMPLE NO	2-Chlorophenol	6670	2.3	3980:60	4680:70	16 : 50
	4-Chloro-3-Methylphenol	6670	ND	4410:66	4840:73	9 : 33
88020371Re	4-Nitrophenol	6670	ND	5530:83	5090:76	8 : 50

Date analyzed: 3-28-88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

BLANK SUMMARY

Blank Summary for Samples: 88020371-0378

Date analyzed: 3-21-88

Compound	Quantity
Diethylphthalate	68.9
Di-n-butylphthalate	2910
Bis-2-ethylphthalate	78.6

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

179.28.3

QUALITY CONTROL REPORT  
 EPA METHOD 625/8270  
 MATRIX: SOIL

Client: ES Atlanta/Volk Field AFB  
 Attn: Jimmy Duncan  
 Address: 57 Executive Park South,  
 N.E., Suite 590  
 Atlanta, GA 30329

Job No.: AT064  
 QC Report No.: BNA-S-0021-88  
 Date Reported: 4-28-88  
 Laboratory Supervisor Approval:

*[Signature]*

QC Report for Samples: 88020371-0378

UNIT: ug/Kg

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

: FRACTION :	COMPOUND	: CONC. SPIKE :	ADDED	: SAMPLE :	CONC. :	% :	CONC. :	% :	: EPA QC LIMITS*						
									RESULT:	MS	REC:	MSD	REC:	RPD:	RPD
:	: 1,2,4-Trichlorobenzene	:	3330	:	ND	:	1240:37*	:	1250:38	:	1	:	23	:	38-107
:	: B/N : Acenaphthene	:	3330	:	ND	:	1150:34	:	1160:35	:	1	:	19	:	31-137
:	: SMO : 2,4-Dinitrotoluene	:	3330	:	ND	:	1620:49	:	1370:41	:	17	:	47	:	28-89
: SAMPLE NO :	: Pyrene	:	3330	:	ND	:	1420:43	:	885:27*	:	46*	:	36	:	35-142
:	: N-Nitroso Di-n-Propylamine	:	3330	:	ND	:	1114:33*	:	1250:38*	:	12	:	38	:	41-126
: 88020371 :	: 1,4-Dichlorobenzene	:	3330	:	ND	:	1200:36	:	1290:39	:	7	:	27	:	28-104
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
: ACID :	: Pentachlorophenol	:	6670	:	ND	:	3020:45	:	2680:40	:	12	:	47	:	17-109
:	: SMO : Phenol	:	6670	:	ND	:	1550:23*	:	1760:26	:	13	:	35	:	26-90
: SAMPLE NO :	: 2-Chlorophenol	:	6670	:	ND	:	1900:28	:	2130:32	:	11	:	50	:	25-102
:	: 4-Chloro-3-Methylphenol	:	6670	:	ND	:	828:12*	:	924:14*	:	11	:	33	:	26-103
: 88020371 :	: 4-Nitrophenol	:	6670	:	ND	:	3070:46	:	2870:43	:	7	:	50	:	11-114
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

Date analyzed: 3-14-88

\* Asterisked values are outside of EPA QC limits  
 \*\* ND = Not Detected

The quality control set was reextracted and reanalyzed. The resulting QC results are within the EPA criteria. Please see report number BNA-S-0021RE-88.

BLANK SUMMARY

Blank Summary for Samples: 88020371-0378

Date analyzed: 3-14-88

<u>Compound</u>	<u>Quantity</u>
Di-n-butylphthalate	370

NOTE: ALL SAMPLE RESULTS ARE BLANK-SUBTRACTED

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
SOIL

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Project: Volk Field AFB  
Laboratory Supervisor Approval: *MMB*

Sample No.	Nitro- benzene-d5 23-120	2-Fluoro- biphenyl 30-115	4,4'-Dibromo- biphenyl 18-137	phenol-d5 24-113	2-Fluoro- phenol 25-121	2,4,6-Tribromo- phenol 19-122
Blank	52	50	68	46	37	46
88010204	69	66	91	63	52	55
88010204 MS	68	62	88	59	44	48
88010204 MSD	65	61	85	54	44	58
88010205	74	90	101	71	64	80
88010206	72	73	89	56	47	31
88010207	52	55	78	7 *	7 *	0 *
88010208	43	48	82	38	28	53
88010209	55	65	73	31	13 *	18 *
88010210	55	59	78	41	25	35
88010211	55	58	79	33	16 *	31
88010212	58	68	85	4 *	8 *	0 *
Blank	56	60	60	57	50	58
88010207 R	65	77	70	66	58	69
88010209 R	77	48	65	78	65	51
88010212 R	80	105	58	86	73	55

\* Values are outside EPA QC limits.  
R Re-extracted sample results.

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
SOIL

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*[Signature]*

Project: Volk Field AFB

Sample No.	Nitro- benzene-d5 23-120	2-Fluoro- biphenyl 30-115	4,4'-Dibromo- biphenyl 18-137	phenol-d5 24-113	2-Fluoro- phenol 25-121	2,4,6-Tribromo- phenol 19-122
Blank	52	50	68	46	37	46
88010214	66	57	80	45	32	37
88010215	74	64	81	58	64	53
88010216	61	55	68	40	45	52
88010217	66	61	71	37	47	57
88010218	88	70	83	22 *	61	61
88010219	72	64	68	53	54	55
88010220	118	110	151 *	72	56	87
88010220 MS	72	68	86	56	46	54
88010220 MSD	73	69	86	51	44	54

\* Values are outside EPA QC limits.

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
SOIL

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

Project: Volk Field AFB *[Signature]*

Sample No.	Nitro- benzene-d5 23-120	2-Fluoro- biphenyl 30-115	4,4'-Dibromo- biphenyl 18-137	phenol-d5 24-113	2-Fluoro- phenol 25-121	2,4,6-Tribromo- phenol 19-122
Blank	69	62	71	60	47	54
88010186	61	55	79	63	50	53
88010186 MS	70	58	72	64	53	53
88010186 MSD	69	59	69	63	55	53
88010187	50	49	94	42	32	62
88010188	DL	DL	DL	DL	DL	DL
88010189	DL	DL	DL	DL	DL	DL
88010190	68	66	63	48	29	47
88010191	68	67	75	38	31	54
88010192	66	73	87	35	32	68
88010193	65	64	96	49	40	55
88010194	53	51	91	48	45	66
88010195	63	59	93	55	44	66
88010196	76	62	91	60	49	52
88010196 MS	76	63	77	66	57	50
88010196 MSD	74	62	79	66	44	48
88010197	77	72	97	27	54	70
88010198	77	100	95	13 *	65	103
88010199	56	73	82	31	41	73

F-56

\* Values are outside EPA QC limits.  
DL Diluted out.

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
SOIL

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
Attn: Jimmy Duncan  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*[Signature]*

Project: Volk Field AFB

Sample No.	Nitro- benzene-d5 23-120	2-Fluoro- biphenyl 30-115	4,4'-Dibromo- biphenyl 18-137	phenol-d5 24-113	2-Fluoro- phenol 25-121	2,4,6-Tribromo- phenol 19-122
Blank	60	71	99	61	44	63
88020289	48	54	77	35	16 *	27
88020289 MS	60	67	82	47	31	40
88020289 MSD	51	55	27	41	28	41
88020290	60	80	61	52	40	56
88020291	45	61	80	39	33	58
88020292	59	65	83	54	43	49
88020293	53	71	65	43	25	38
88020294	47	61	60	50	43	36
88020295	79	83	46	51	37	31
88020296	39	53	51	38	26	27
88020297	54	68	56	51	39	27
88020298	49	63	60	48	39	36
88020299	59	65	72	49	34	38
88020300	59	66	84	54	37	38

\* Values are outside EPA QC limits.

SEMIVOLATILE SURROGATE PERCENT RECOVERY  
SOIL

Job No.: AT077 Date Reported: 9-27-88

Client: ES Atlanta  
 Attn: Jimmy Duncan  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Laboratory Supervisor Approval:

*[Signature]*

Project: Volk Field AFB

Sample No.	Nitro- benzene-d5 23-120	2-Fluoro- biphenyl 30-115	4,4'-Dibromo- biphenyl 18-137	phenol-d5 24-113	2-Fluoro- phenol 25-121	2,4,6-Tribromo- phenol 19-122
88020371	41	46	49	38	31	34
88020371 MS	38	40	52	25	18 *	21
88020371 MSD	40	42	49	29	21 *	20
88020372	39	41	45	24	9 *	13 *
88020372 R	56	61	86	56	48	54
88020373	34	32	36	28	21 *	20
88020374	34	34	39	34	25	23
88020375	40	39	41	33	22 *	20
88020376	38	36	35	36	27	23
88020377	32	33	34	21 *	9 *	9 *
88020378	37	37	41	33	24 *	23
Blank	38	40	46	34	30	29

\* Values are outside EPA QC limits.  
 R Re-extracted sample results.



Soil Surrogate Percent Recovery Summary

Client: ES Atlanta/Volk AFB  
 Attn: Jimmy Duncan  
 Address: Suite 590  
 57 Executive Park  
 Atlanta, GA 30329

Job Number: AT077  
 Date Reported: 3-10-88

Sample No.	Toluene d-8 (61-117)	Bromo-fluoro benzene (74-121)	1,2-Dichloroethane d4 (70-121)	Nitro-benzene (23-120)	2-fluoro-biphenyl (30-115)	4,4'Dibromo-biphenyl (18-137)	Phenol d-5 (24-113)	2-fluoro phenol (25-121)	2,4,6-tri-bromophenol (19-122)	Dibutyl-chlorodate (20-150)**
88010195	NA	NA	NA	63	59	93	55	44	66	NA
88010196	NA	NA	NA	61	58	111	49	41	62	NA
88010196MS	NA	NA	NA	63	58	90	33	46	68	NA
88010196MSD	NA	NA	NA	60	51	90	45	45	66	NA
88010197	NA	NA	NA	77	72	97	27	54	70	NA
88010198	NA	NA	NA	77	100	95	13*	65	103	NA
88010199	NA	NA	NA	56	73	82	31	41	73	NA
BLANK	NA	NA	NA	69	62	71	60	47	54	NA

\* Values are outside of contract required QC limits  
 \*\* Advisory limits only  
 NA = Not applicable DL = Diluted out

Volatile: NA out of NA ; outside of QC limits.  
 Semivolatile: 1 out of 48 ; outside of QC limits.  
 Pesticides: NA out of NA ; outside of QC limits.

Laboratory Supervisor Approval

Soil Surrogate Percent Recovery Summary

Client: ES Atlanta/Volk AFB  
 Attn: Jimmy Duncan  
 Address: Suite 590  
 57 Executive Park  
 Atlanta, GA 30329

Job Number: AT077  
 Date Reported: 3-10-88

Sample No.	Toluene d-8 (61-117)	Bromo-benzene (74-121)	1,2-Dichloroethane d4 (70-121)	Nitro-benzene (23-120)	2-fluoro-biphenyl (30-115)	Terphenyl-d-14 (18-137)	Phenol d-5 (24-113)	2-fluoro-phenol (25-121)	2,4,6-tri-bromophenol (19-122)	Dibutyl-chlorodate (20-150)**
88010186	NA	NA	NA	62	63	94	57	46	74	NA
88010186MS	NA	NA	NA	52	50	93	45	36	66	NA
88010186MSD	NA	NA	NA	71	69	107	61	51	80	NA
88010187	NA	NA	NA	50	49	94	42	32	62	NA
88010188	NA	NA	NA	DL	DL	DL	DL	DL	DL	NA
88010189	NA	NA	NA	DL	DL	DL	DL	DL	DL	NA
88010190	NA	NA	NA	68	66	63	48	29	47	NA
88010191	NA	NA	NA	68	67	75	38	31	54	NA
88010192	NA	NA	NA	66	73	87	35	32	68	NA
88010193	NA	NA	NA	65	64	96	49	40	55	NA
88010194	NA	NA	NA	53	51	91	48	45	66	NA

\* Values are outside of contract required QC limits  
 \*\* Advisory limits only  
 NA = Not applicable DL = Diluted out  
 Volatile: NA out of NA ; outside of QC limits.  
 Semivolatile: 0 out of 66 ; outside of QC limits.  
 Pesticides: NA out of NA ; outside of QC limits.

Laboratory Supervisor Approval

*[Handwritten Signature]*

QUALITY CONTROL RESULTS SUMMARY  
 ORGANOCHLORINE PESTICIDES AND PCB'S  
 SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos: 88030537-0538, 88030540

QC Report No: PCB-W-0004-88

Spike Duplicates: Blank

Date Analyzed: 3-23-88

Spike: Blank

Laboratory Supervisor Approval:

Sample Matrix

*DWB* :

Water (ug/L)

Dilution Factor: NA

Compound	Blank	Duplicates			Spike Recovery				CLP QC Limits	
		MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	22	40-120
q-BHC (Lindane)	NA	NA	NA	NA	NA	NA	NA	NA	15	56-123
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	18	52-126
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	21	56-121
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	20	40-131
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	27	40-131
PCB-1260	ND	0.93	0.88	6	1.0	NA	0.93	93		

\* Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$  MS = Spike Sample  
 MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$  SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY  
 ORGANOC<sub>H</sub>LORINE PESTICIDES AND PCB'S  
 SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No: PCB-W-0006-88

Lab Sample Nos: 88030554,  
 88030565-88030569

Date Reported: 5-19-88

Spike Duplicates: 88030566

Date Analyzed: 3-23-88

Spike: 88030566

Laboratory Supervisor Approval:

Sample Matrix

*RWB* :

Water (ug/L)

Dilution Factor: NA

Compound	Blank	Duplicates			Spike Recovery				CLP QC Limits	
		MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	NA	NA	NA	NA	NA	ND	NA	NA	22	40-120
q-BHC (Lindane)	NA	NA	NA	NA	NA	ND	NA	NA	15	56-123
Dieldrin	NA	NA	NA	NA	NA	ND	NA	NA	18	52-126
Endrin	NA	NA	NA	NA	NA	ND	NA	NA	21	56-121
Heptachlor	NA	NA	NA	NA	NA	ND	NA	NA	20	40-131
4,4'-DDT	NA	NA	NA	NA	NA	ND	NA	NA	27	40-131
PCB-1260	ND	1.03	0.99	4	1.0	ND	1.03	103		

\* Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable.

$$\text{Relative Percent Difference (RPD)} = \frac{\text{MS} - \text{MSD}}{(\text{MS} + \text{MSD})/2} \times 100$$

MS = Spike Sample  
MSD = Spike Duplicate

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)



QUALITY CONTROL RESULTS SUMMARY  
ORGANOCHLORINE PESTICIDES AND PCB'S  
SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, G. 30329

Job No.: AT077

Lab Sample Nos: 88030554, 88030565-0569

QC Report No: PCB-W-0009-88

Spike Duplicates: 88030566

Date Analyzed: 3-23-88

Spike: 88030566

Date Reported: 5-23-88

Laboratory Supervisor Approval:

Sample Matrix

*D.W. Benton* :

Water (ug/L)

Dilution Factor: NA

Compound	Blank	Duplicates			Spike Recovery				CLP	QC	Limits
		MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC	
Aldrin	ND	ND	ND	NC	NA	ND	NA	NA	22	40-120	
q-BHC (Lindane)	ND	ND	ND	NC	NA	ND	NA	NA	15	56-123	
Dieldrin	ND	ND	ND	NC	NA	ND	NA	NA	18	52-126	
Endrin	ND	ND	ND	NC	NA	ND	NA	NA	21	56-121	
Heptachlor	ND	ND	ND	NC	NA	ND	NA	NA	20	40-131	
4,4'-DDT	ND	ND	ND	NC	NA	ND	NA	NA	27	40-131	
PCB-1260	ND	1.03	0.99	4	1.0	ND	1.03	103			

\* Asterisked values are outside the CLP QC limits.

ND = Not Detected. NA = Not Applicable. NC = Not Calculated.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$  MS = Spike Sample  
MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$  SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY  
 ORGANOCHLORINE PESTICIDES AND PCB'S  
 SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos: 88030537, 88030538,  
 88030540

QC Report No: PCB-W-0010-88

Spike Duplicates: Blank MS

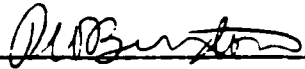
Date Analyzed: 3-23-88

Date Reported: 5-23-88

Spike: Blank MSD

Laboratory Supervisor Approval:

Sample Matrix

 :

Water (ug/L)

Dilution Factor: NA

Compound	Blank	Duplicates			Spike Recovery				CLP RPD	QC Limits REC
		MS	MSD	RPD	SA	SR	SSR	PR		
Aldrin	ND	ND	ND	NC	NA	ND	NA	NA	22	40-120
q-BHC (Lindane)	ND	ND	ND	NC	NA	ND	NA	NA	15	56-123
Dieldrin	ND	ND	ND	NC	NA	ND	NA	NA	18	52-126
Endrin	ND	ND	ND	NC	NA	ND	NA	NA	21	56-121
Heptachlor	ND	ND	ND	NC	NA	ND	NA	NA	20	40-131
4,4'-DDT	ND	ND	ND	NC	NA	ND	NA	NA	27	40-131
PCB-1260	ND	0.93	0.88	5	1.0	ND	0.93	93		

\* Asterisked values are outside the CLP QC limits.

The laboratory control sample is designated as a quality control sample for this batch. Insufficient sample available for QC purpose.

ND = Not Detected. NA = Not Applicable. NC = Not Calculated.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$  MS = Spike Sample  
 MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$  SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY  
ORGANOCHLORINE PESTICIDES AND PCB'S  
SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos: 88030572, 880300573  
88030575, 88030576

QC Report No: PCB-W-0011-88

Spike Duplicates: Blank MS

Date Analyzed: 3-24-88

Date Reported: 5-23-88

Spike: Blank MSD

Laboratory Supervisor Approval:

Sample Matrix

AWB :

Water (ug/L)

Dilution Factor: NA

Compound	Blank	Duplicates			Spike Recovery				CLP QC Limits	
		MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	ND	ND	ND	NC	NA	ND	NA	NA	22	40-120
q-BHC (Lindane)	ND	ND	ND	NC	NA	ND	NA	NA	15	56-123
Dieldrin	ND	ND	ND	NC	NA	ND	NA	NA	18	52-126
Endrin	ND	ND	ND	NC	NA	ND	NA	NA	21	56-121
Heptachlor	ND	ND	ND	NC	NA	ND	NA	NA	20	40-131
4,4'-DDT	ND	ND	ND	NC	NA	ND	NA	NA	27	40-131
PCB-1260	ND	0.99	0.87	13	1.0	ND	0.99	99		

\* Asterisked values are outside the CLP QC limits.

The laboratory control sample is designated as a quality control sample for this batch. Insufficient sample available for QC purpose.

ND = Not Detected. NA = Not Applicable. NC = Not Calculated.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$  MS = Spike Sample  
MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$  SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)



PESTICIDE SURROGATE RECOVERY  
WATER

Job No.: AT077

Client: ES Atlanta  
Dan Lane  
57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Date Reported: 9-29-88

Laboratory Supervisor Approval:

Project: Volk Field AFB

*[Signature]*

Sample Number	S1 (DBC)%#	Sample Number	S1 (DBC)%#
Blank	98		
88030522	78		
88030527	78		
88030528	58		
88030529	75		
88030530	184*		
88030531	93		
88030531 MS	100		
88030531 MSD	99		
88030533	101		
88030536	142		
88030539	97		
Blank	125		
Blank MS	154*		
Blank MSD	181*		

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchorendate % recovery

# = Column to be used to flag recovery values with an asterisk

\* = Values outside of QC limits

DL = Diluted out

PESTICIDE SURROGATE RECOVERY  
WATER

Job No.: AT077

Client: ES Atlanta  
Dan Lane  
57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Date Reported: 9-29-88

Laboratory Supervisor Approval:

Project: Volk Field AFB

*R. W. Bunker*

Sample Number	S1 (DBC)%#	Sample Number	S1 (DBC)%#
88030574	87		
Blank	67		
Blank MS	119		
Blank MSD	116		

ADVISORY QC LIMITS (20-150)

S1 (DBC) = Dibutylchorendate % recovery

# = Column to be used to flag recovery values with an asterisk

\* = Values outside of QC limits

DL = Diluted out

QUALITY CONTROL RESULTS SUMMARY  
 ORGANOCHLORINE PESTICIDES AND PCB'S  
 SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos: 88020371-88020378

QC Report No: PCB-S-0002-88

Spike Duplicates: 88020371

Date Analyzed: 2-26-88

Date Reported: 5-23-88

Spike: 88020371

Laboratory Supervisor Approval:

Sample Matrix

 :  
 Dilution Factor: NA

Soil (ug/KG)

\*\*Moisture: NA

Compound	Blank	Duplicates			Spike Recovery				CLP QC Limits	
		MS	MSD	RPD	SA	SR	SSR	PR	RPD	REC
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	22	40-120
q-BHC (Lindane)	NA	NA	NA	NA	NA	NA	NA	NA	15	56-123
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	18	52-126
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	21	56-121
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	20	40-131
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	27	40-131
PCB-1260	NA	39.3	29.3	29	33.3	ND	39.3	118		

\* Asterisked values are outside the CLP QC limits.

\*\* If % moisture is reported, results are presented on a dry-weight basis.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$       MS = Spike Sample  
 MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$       SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY  
ORGANOCHLORINE PESTICIDES AND PCB'S  
SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South  
N. E. - Suite 590  
Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos: 88020289-88020296

QC Report No: PCB-S-0003-88

Spike Duplicates: 88020292

Date Analyzed: 2-27-88

Date Reported: 5-23-88

Spike: 88020292

Laboratory Supervisor Approval:

Sample Matrix

*RWB*  
\_\_\_\_\_  
Dilution Factor: NA

Soil (ug/KG)

\*\*Moisture: NA

Compound	Blank	Duplicates			Spike Recovery				CLP RPD	QC Limits REC
		MS	MSD	RPD	SA	SR	SSR	PR		
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	22	40-120
q-BHC (Lindane)	NA	NA	NA	NA	NA	NA	NA	NA	15	56-123
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	18	52-126
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	21	56-121
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	20	40-131
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	27	40-131
PCB-1260	ND	29.3	29.6	1	33.3	ND	29.3	88		

\* Asterisked values are outside the CLP QC limits.

\*\* If % moisture is reported, results are presented on a dry-weight basis.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$       MS = Spike Sample  
MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$       SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS SUMMARY  
 ORGANOCHLORINE PESTICIDES AND PCB'S  
 SW METHOD 8080/608

Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Job No.: AT077

Lab Sample Nos: 88020297-88020300

QC Report No: PCB-S-0004-88

Spike Duplicates: 88020297

Date Analyzed: 2-27-88

Date Reported: 5-23-88

Spike: 88020297

Laboratory Supervisor Approval:

Sample Matrix

  
 Dilution Factor: NA

Soil (ug/KG)

\*\*Moisture: NA

Compound	Blank	Duplicates			Spike Recovery				CLP RPD	QC Limits REC
		MS	MSD	RPD	SA	SR	SSR	PR		
Aldrin	NA	NA	NA	NA	NA	NA	NA	NA	22	40-120
q-BHC (Lindane)	NA	NA	NA	NA	NA	NA	NA	NA	15	56-123
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA	18	52-126
Endrin	NA	NA	NA	NA	NA	NA	NA	NA	21	56-121
Heptachlor	NA	NA	NA	NA	NA	NA	NA	NA	20	40-131
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	27	40-131
PCB-1260	ND	31.1	30.4	2.1	33.3	ND	31.1	93		

\* Asterisked values are outside the CLP QC limits.

\*\* If % moisture is reported, results are presented on a dry-weight basis.

ND = Not Detected. NA = Not Applicable.

Relative Percent Difference (RPD) =  $\frac{MS - MSD}{(MS + MSD)/2} \times 100$  MS = Spike Sample  
 MSD = Spike Duplicate

Percent Recovery (PR) =  $\frac{SSR - SR}{SA} \times 100$  SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

SOIL PESTICIDE SURROGATE RECOVERY


Job No.: AT077

Client: ES Atlanta  
 Jimmy Duncan  
 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Date Analyzed: 2-29-88  
 Date Reported: 9-26-88

Laboratory Supervisor Approval:

Project: Volk Field AFB



Sample Number	S1 (DBC)%#	Sample Number	S1 (DBC)%#
Blank	102	88010204	90
88010195	74	88010205	88
88010195 MS	210 *	88010206	DL
88010195 MSD	152	88010206 MS	DL
88010199	88	88010206 MSD	DL
88010199 MS	96	88010207	70
88010199 MSD	96	88010208	78
88010187	118	88010209	72
88010188	DL	88010210	86
88010189	DL	88010211	104
88010190	DL	88010212	DL
88010191	DL	Blank	60
88010192	DL	88010214	88
88010193	72	88010215	92
88010194	104	88010216	90
88010196	124	88010216 MS	76
88010197	78	88010216 MSD	64
88010198	98	88010217	68
88010186	150	88010218	68
Blank	136 *	88010219	84
Blank	98	88010220	102

ADVISORY QC LIMITS (24-154)

S1 (DBC) = Dibutylchorendate % recovery

# = Column to be used to flag recovery values with an asterisk

\* = Values outside of QC limits

DL = Diluted out

SOIL PESTICIDE SURROGATE RECOVERY

Job No.: AT077

Client: ES Atlanta  
 Jimmy Duncan  
 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

Date Analyzed: 2-29-88  
 Date Reported: 9-26-88

Laboratory Supervisor Approval:

Project: Volk Field AFB

*[Signature]*

Sample Number	S1 (DBC)%#	Sample Number	S1 (DBC)%#
Blank	93	88020298	64
88020289	72	88020299	79
88020290	71	88020300	87
88020291	107	Blank	76
88020292	93	88020371	64
88020292 MS	81	88020372	92
88020292 MSD	84	88020373	93
88020293	85	88020374	99
88020294	95	88020375	100
88020295	89	88020376	88
88020296	78	88020377	78
88020297	83	88020378	90
88020297 MS	72	88020371 MS	86
88020297 MSD	82	88020371 MSD	78

ADVISORY QC LIMITS (24-154)

S1 (DBC) = Dibutylchorendate % recovery

# = Column to be used to flag recovery values with an asterisk

\* = Values outside of QC limits

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: SOL-W-0005-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030536-0540

F-74

Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date	Anal Method	Blank	C1	Duplicate C2	RPD	SA	Spike Recovery SR	SSR	PR	Notes
TDS	88030536	NA	3/10/88	E160.1	<10	33.0	32.0	3	NA	NA	NA	NA	NA

NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)



Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: SOL-W-0006-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030522, 88030527-0533

F-75

Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date	Anal Method	Blank	C1	C2	Duplicate C2	RPD	SA	SR	SSR	PR	Notes
TDS	88030522	NA	3/08/88	E160.1	<10	64.0	54.0	54.0	17	NA	NA	NA	NA	NA

NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: SOL-W-0007-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
QC Report for Sample Nos.:  
88030551-0557, 88030562

F-76

Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date	Anal Method	Blank	C1	C2	Duplicate RPD	SA	SR	SSR	PR	Notes
TDS	88030551	NA	3/10/88	E160.1	<10	48.0	50.0	4	NA	NA	NA	NA	NA

NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Environmental Quality Parameters

Page 1 of 1

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn.: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: SOL-W-0008-88  
Date Reported: 5/05/88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA  
\*QC Report for Sample Nos.:  
88030565-0576

Analytical Parameter	Laboratory Duplicates	Sample Nos.	Date	Anal Method	Blank	Duplicate		Spike Recovery		Notes		
						C1	C2	SA	SR			
TDS	88030575	NA	3/15/88	E160.1	24	131	109	18	NA	NA	NA	NA

\* All samples are blank corrected.

NA = Not applicable

NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Metals

ES Job No.: AT077  
Client: ES Atlanta/VOIX Field AFB  
Attn.: Jimmy Duncan  
Address: 57 Executive Park - Suite 590  
Atlanta, GA 30329

QC Report No.: ICP-W-0036-88  
Date Reported: 5-15-88  
Laboratory Supervisor Approval:

*Leif J. Dickinson*

Sample Matrix:  
Water (mg/L)

Dilution Factor: NA

QC Report for Sample Nos.: 88030522, 88030527-0531, 88030533, 88030536, 88030539

Analytical Parameter	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Method Anal	Blank	C1	Duplicate		RPD	SA	Spike Recovery		Notes
							C2	C2			SR	SSR	
Antimony	88030522	88030522	5-02-88	E200.7	<0.060	<0.060	<0.060	<0.060	NC	0.500	<0.060	0.489	98
Beryllium	88030522	88030522	4-25-88	E200.7	<0.005	<0.001	<0.001	<0.001	NC	0.050	<0.001	0.050	100
Cadmium	88030522	88030522	4-25-88	E200.7	<0.010	<0.010	<0.010	<0.010	NC	0.050	<0.010	0.054	108
Chromium	88030522	88030522	4-25-88	E200.7	<0.050	0.0108	0.0118	0.0118	10	0.200	0.0108	0.222	106
Copper	88030522	88030522	4-25-88	E200.7	<0.025	0.0148	0.0188	0.0188	25	0.250	0.0148	0.268	102
Nickel	88030522	88030522	4-25-88	E200.7	<0.040	<0.010	<0.010	<0.010	NC	0.400	<0.010	0.402	101
Silver	88030522	88030522	5-03-88	E200.7	<0.050	<0.010	<0.010	<0.010	NC	0.050	<0.010	0.036	72N A
Thallium	88030522	88030522	4-25-88	E200.7	<0.100	0.104	<0.100	<0.100	NC	2.50	0.104	2.73	105
Vanadium	88030522	88030522	4-25-88	E200.7	<0.100	<0.100	<0.100	<0.100	NC	0.500	<0.100	0.539	108
Zinc	88030522	88030522	5-02-88	E200.7	<0.020	0.020	0.016	0.016	NC	0.200	0.020	0.237	109

NC = Not calculated  
NA = Not applicable

N = See attached legend  
B = See attached legend  
A = See Case Narrative

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

$$C1 = \text{Concentration One}$$

$$C2 = \text{Concentration Two}$$

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

$$SSR = \text{Spiked Sample Result}$$

$$SR = \text{Sample Result}$$

$$SA = \text{Spike Added (Concentration)}$$

**CASE NARRATIVE**  
Quality Control Summary Report  
QC Report No.: ICP-W-0036-88

This group of samples was received at Berkeley Laboratory. It consisted of eight samples to be analyzed for metals.

Silver spike recovery for this sample does not fall within the normal recovery range; however, this is attributed to the low solubility of silver in this preparation matrix.

Where possible, sample results are provided as estimated values below the reporting limit, but above the detection limit, for the parameter of interest. While this is more informative, it affects the application of quality control limits.

The QC sample for the analyte(s) listed was spiked at a concentration at or below the reporting limit due to sample preparation being completed prior to establishment of this limit: Ag.

181.28.1

LEGEND FOR RESULT QUALIFIERS

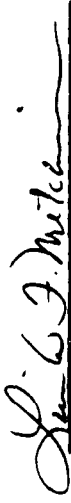
- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Metals

ES Job No.: AT077  
Client: ES Atlanta/VOLK Field AFB  
Attn.: Jimmy Duncan  
Address: 57 Executive Park - Suite 590  
Atlanta, GA 30329

QC Report No.: ICP-W-0037-88  
Date Reported: 5-13-88  
Laboratory Supervisor Approval:



Sample Matrix:  
Water (mg/L)

Dilution Factor: NA

QC Report for Sample Nos.: 88030551-0553, 88030556-0557, 88030562, 88030574

Analytical Parameter	Laboratory Duplicates	Laboratory Spike	Sample Nos.	Date Anal	Anal Method	Blank	C1	C2	Duplicate RPD	SA	SR	Spike Recovery SSR	Notes PR
Antimony	88030574	88030574	88030574	5-02-88	E200.7	<0.060	<0.060	<0.060	NC	0.500	<0.060	0.496	99
Beryllium	88030574	88030574	88030574	4-25-88	E200.7	<0.005	<0.001	<0.001	NC	0.050	<0.001	0.047	94
Cadmium	88030574	88030574	88030574	4-25-88	E200.7	<0.010	<0.010	<0.010	NC	0.050	<0.010	0.049	98
Chromium	88030574	88030574	88030574	4-25-88	E200.7	<0.050	<0.010	<0.010	NC	0.200	<0.010	0.187	93
Copper	88030574	88030574	88030574	4-25-88	E200.7	<0.025	<0.010	<0.010	NC	0.250	<0.010	0.250	100
Nickel	88030574	88030574	88030574	4-25-88	E200.7	<0.040	<0.010	<0.010	NC	0.400	<0.010	0.360	90
Silver	88030574	88030574	88030574	5-05-88	E200.7	<0.050	<0.010	<0.010	NC	0.050	<0.010	0.030	60N A
Thallium	88030574	88030574	88030574	4-25-88	E200.7	<0.100	<0.100	<0.100	NC	2.50	<0.100	2.53	101
Vanadium	88030574	88030574	88030574	4-25-88	E200.7	<0.100	<0.100	<0.100	NC	0.500	<0.100	0.481	96
Zinc	88030574	88030574	88030574	5-02-88	E200.7	<0.020	<0.010	<0.010	NC	0.200	<0.010	0.212	106

NC = Not calculated  
NA = Not applicable

N = See attached legend  
B = See attached legend

A = See Case Narrative

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

CASE NARRATIVE  
Quality Control Summary Report  
QC Report No: ICP-W-0037-88

This group of samples was received at Berkeley Laboratory. It consisted of seven samples to be analyzed for metals.

Silver spike recovery for this sample does not fall within the normal recovery range; however, this is attributed to the low solubility of silver in this preparation matrix.

Where possible, sample results are provided as estimated values below the reporting limit, but above the detection limit, for the parameter of interest. While this is more informative, it affects the application of quality control limits.

The QC sample for the analyte(s) listed was spiked at a concentration at or below the reporting limit due to sample preparation being completed prior to establishment of this limit: Ag.

181.23.1



LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Metals

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: AAF-W-0014-88  
Date Reported: 5/16/88  
Laboratory Supervisor Approval:



Dilution Factor: NA

Sample Matrix:  
Water (mg/L)

QC Report for Sample Nos.:  
88030522, 88030527-0531,  
88030551-0553

Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes		
						C1	C2	RPD	SA		SR	SSR
Arsenic	88030409	88030409	4/29/88	206.2	<0.005	<0.005W	<0.005W	NC	0.020	<0.005W	0.035	175
Lead	88030409	88030409	5/05/88	E239.2	<0.005	<0.005	<0.005	NC	0.010	<0.005	0.019	190
Selenium	88030409	88030409	4/27/88	270.2	<0.005	<0.005W	<0.005W	NC	0.020	<0.005W	0.027	135

NA = Not applicable  
NC = Not calculated  
W = See attached legend

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

QUALITY CONTROL RESULTS  
METALS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: AAF-S-0004-88  
 Date Reported: 5-19-88  
 Laboratory Supervisor Approval:

*David D. Mitchell*

Sample Matrix:  
Soil (mg/KG)

Dilution Factor: NA  
 Moisture: NA

QC Report for Sample Nos.: 88010207-88010212, 88010214-88010216

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes		
						C1	C2	RPD	SA		SR	SSR
Lead	88010207	88010207	5-11-88	SM3050	<0.500	1.80	1.80	0	5.00	1.80	5.80	80

7-86

NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}}$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS  
METALS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: AAF-S-0005-88  
 Date Reported: 5-18-88  
 Laboratory Supervisor Approval:



Sample Matrix:  
 Soil (mg/KG)

Dilution Factor: NA  
 #Moisture: NA

QC Report for Sample Nos.: 88020294-88020300, 88020371-88020372

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes		
						C1	C2	SA	SR			
Lead	88020294	88020294	5-11-88	SW3050	<0.500	0.600	0.700	NC	5.000.600	4.8	84	A

A = See case narrative attached  
 NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
 C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

88-A1-VOLK0058 1

QC-FRM04

CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88020294-88020300, 88020371-88020372  
QC Report Number: AAF-S-0005-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

QUALITY CONTROL RESULTS  
METALS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: AAF-S-0006-88  
 Date Reported: 5-18-88  
 Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
 Soil (mg/KG)

Dilution Factor: NA  
 Moisture: NA

QC Report for Sample Nos.: 88020373-88020378

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate			Spike Recovery			Notes
						C1	C2	RPD	SA	SR	SSR	

Lead	88020373	88020373	5-11-88	SW3050	<0.500	<0.500	<0.500	NC	5.00	<0.500	4.60	92
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NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

C1 = Concentration One  
 C2 = Concentration Two  
 SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS  
METALS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: AAF-S-0007-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:

*Frank J. M. [Signature]*

Sample Matrix: Soil (mg/KG)  
 Dilution Factor: 10  
 Moisture: N/A

QC Report for Sample Nos: 88010189, 88010195-88010199, 88010204-88010206

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes			
						C1	C2	RPD	SA		SR	SSR	
Lead	88010189	88010189	5-11-88	SW3050	<0.500	74.0	113	41*	50.0	74.0	75.0	2	A

\*\* If % moisture is reported, results are presented on a dry-weight basis.  
 \* See attached legend  
 A See Case Narrative attached

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
 C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)



CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88010189, 88010195-88010199,  
88010204-88010206  
Work Order Number AAF-S-0007-88

The value reported for the sample 88010189 is different than shown on the QC Results Summary.

The reported value for the sample used for QC was achieved by the Method of Standard Additions (MSA). This requirement for MSA was a result of spike recoveries outside acceptable limits for the predigestion sample spike and post digestion analytical spike on the sample.

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (95-115%), while sample absorbance is less than 50% of spike absorbance.

QUALITY CONTROL RESULTS  
METALS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: AAF-S-0008-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
Soil (mg/KG)

Dilution Factor: 10  
 Moisture: N/A

QC Report for Sample Nos: 88010217-88010220, 88020289-88020293

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes			
						C1	C2	RPD	SA		SR	SSR	PR
Lead	88010217	88010217	5-11-88	SW3050	<0.500	22.0	13.0	51*	40	22.0	79.0	142	A

\* If moisture is reported, results are presented on a dry-weight basis.  
 \* See legend attached  
 A See Case Narrative attached

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

LEGEND FOR RESULT QUALIFIERS

- B Reported value is less than Reporting limit but greater than the MDL.
- N Spiked sample recovery not within control limits.
- S Reported value was determined by the Method of Standard Additions.
- \* Duplicate analysis not within control limits.
- J Sample value is corrected by the analyte concentration found in the blank.
- W Post digestion spike for Furnace AA analysis out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.

CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88010217-88010220, 88020289-88020293  
Work Order Number AAF-S-0008-88

The value reported for the sample 88010217 is different than shown on the QC Results Summary.

The reported value for the sample used for QC was achieved by the Method of Standard Additions (MSA). This requirement for MSA was a result of spike recoveries outside acceptable limits for the predigestion sample spike and post digestion analytical spike on the sample.

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Metals

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: CVM-W-0004-88  
Date Reported: 5/16/88  
Laboratory Supervisor Approval:



Dilution Factor: NA

Sample Matrix:  
Water (mg/L)

QC Report for Sample Nos.:  
88030522, 88030527-0531,  
88030533, 88030536, 88030539,  
88030574

Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	C1	C2	Duplicate RPD	Spike SA	Recovery SR	Notes
Mercury	88030529	88030529	3/28/88	E245.1	<0.0002	<0.0002	<0.0002	NC	0.002	<0.0002	0.002 100

NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

Engineering-Science  
Berkeley Laboratory

QUALITY CONTROL RESULTS SUMMARY  
Metals

ES Job No.: AT077  
Client: ES Atlanta/Volk Field AFB  
Attn: Dan Lane  
Address: 57 Executive Park South,  
N.E., Suite 590  
Atlanta, GA 30329

QC Report No.: CVM-W-0005-88  
Date Reported: 5/16/88  
Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
Water (mg/L)

Dilution Factor: NA

QC Report for Sample Nos.:  
88030551-0553, 88030556-0557,  
88030562

F-97

Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank		Duplicate		Spike Recovery		Notes
					C1	C2	C1	C2	SA	SR	

Mercury 88030562 88030562 4/05/88 E245.1 <0.0002 <0.0002 <0.0002 NC 0.002 <0.0002 0.00194 97

NA = Not applicable  
NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

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QUALITY CONTROL RESULTS  
ENVIRONMENTAL QUALITY PARAMETERS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: SOL-S-0002-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:



Sample Matrix:  
Soil %

QC Report for Sample Nos: 88020289-88020300

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes		
						C1	C2	RPD	SA		SR	SSR
Moisture	88020300	NA	4-27-88	D2216	NA	1.0	1.0	NC	NA	NA	NA	A

A = See Case Narrative attached  
 NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

C1 = Concentration One  
 C2 = Concentration Two  
 SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)



CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88020289-88020300  
Work Order Number SOL-S-0002-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

**QUALITY CONTROL RESULTS  
ENVIRONMENTAL QUALITY PARAMETERS**

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: SOL-S-0003-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
 Soil #

QC Report for Sample Nos: 88010204-88010212

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	C1	Duplicate		Spike Recovery		Notes	
							C2	RPD	SA	SR		SSR
Moisture	88010212	NA	4-27-88	D2216	NA	5.2	5.0	4	NA	NA	NA	NA

NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
 C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

QUALITY CONTROL RESULTS  
ENVIRONMENTAL QUALITY PARAMETERS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: SOL-S-0004-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:

*Leah J. Dink*

Sample Matrix:  
Soil %

QC Report for Sample Nos: 88010186-88010199

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes
						C1	C2	SA	SR	
Moisture	88010199	NA	4-26-88	D2216	NA	2.1	2.1	NA	NA	NA A

A = See Case Narrative attached  
 NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

$$\text{Percent Recovery (PR)} = \frac{SSR - SR}{SA} \times 100$$

C1 = Concentration One  
 C2 = Concentration Two  
 SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88010186-88010199  
Work Order Number SOL-S-0004-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined as duplicate values within one detection limit of each other.

**QUALITY CONTROL RESULTS  
ENVIRONMENTAL QUALITY PARAMETERS**

ES Job No.: At077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57Executive Park South  
 N E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: SOL-S-0005-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
 Soil

QC Report for Sample Nos: 88010214-88010220

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	Duplicate		Spike Recovery		Notes
						C1	C2	SA	SR	
Moisture	88010220	NA	4-26-88	D2216	NA	3.8	3.5	NA	NA	NA A

A = See Case Narrative attached  
 NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
 SR = Sample Result  
 SA = Spike Added (Concentration)

CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88010214-88010220  
Work Order Number SOL-S-0005-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.

QUALITY CONTROL RESULTS  
ENVIRONMENTAL QUALITY PARAMETERS

ES Job No.: AT077  
 Client: ES Atlanta/Volk field AFB  
 Attn: Dan Lane  
 Address: 57 Executive Park South  
 N. E. - Suite 590  
 Atlanta, Ga. 30329

QC Report No.: SOL-S-0006-88  
 Date Reported: 5-17-88  
 Laboratory Supervisor Approval:

*[Signature]*

Sample Matrix:  
Soil %

QC Report for Sample Nos: 88020371-88020378

Analyte Metal	Laboratory Duplicates	Sample Nos. Spike	Date Anal	Anal Method	Blank	C1	Duplicate C2	RPD	SA	SR	SSR	PR	Notes
Moisture	88020378	NA	4-26-88	D2216	NA	3.4	4.1	NC	NA	NA	NA	NA	A

A = See Case Narrative attached.  
 NA = Not applicable  
 NC = Not calculated

$$\text{Relative Percent Difference (RPD)} = \frac{C1 - C2}{(C1 + C2)/2} \times 100$$

C1 = Concentration One  
C2 = Concentration Two

$$\text{Percent Recovery (PR)} = \frac{\text{SSR} - \text{SR}}{\text{SA}} \times 100$$

SSR = Spiked Sample Result  
SR = Sample Result  
SA = Spike Added (Concentration)

CASE NARRATIVE  
QUALITY CONTROL RESULTS SUMMARY  
Samples No.: 88020371-88020378  
Work Order Number SOL-S-0006-88

The Relative Percent Difference is not calculated since the sample values are less than five times the detection limit. Acceptable RPD in this case is defined a duplicate values within one detection limit of each other.