NAS Jacksonville Administrative Record
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ABB
ASEA BROWN BOVERI

December 6, 1994

Naval Air Station Jacksonville
Jacksonville, Florida

Attn: Mr. Kevin Gartland

SUBJECT: CONTRACT N62467-89-D-0317, INSTALLATION RESTORATION PROGRAM GROUNDWATER STORED FROM PUMPING TEST OPERABLE UNIT 1, NAS JACKSONVILLE

Dear Mr. Gartland,

As you know, ABB-ES recently conducted a pumping test at Operable Unit 1, NAS Jacksonville to verify the USGS groundwater flow model results. As a result of the pumping test, approximately 14,000 gallons of groundwater has been stored in tanks (2) onsite pending results of chemical analysis. A sample of the pumped groundwater contained in the tanks was analyzed by an offsite laboratory for the Target Compound List organic compounds, Target Analyte List inorganics, miscellaneous wet chemistry and radiological parameters (gross-alpha and gross-beta).

The attached tables (Form 1s) summarize the analytical results. There are no significant detections of semivolatile organic compounds, pesticides and polychlorinated biphenyl compounds, radiological parameters, and inorganic analytes, however, some volatile organic compounds have been detected in the pumped groundwater. It should be noted that the analytical results have not been subjected to an independent third-party data validation process.

ABB-ES suggests that the stored groundwater may be disposed of through the base wastewater treatment facility. The water should be acceptable to the treatment plant as the levels do not exceed the PWC JAX pretreatment "proposed" standard for IR site cleanup of 2,000 μg/L total toxic organics.

Please do not hesitate to give me or Dr. Alexander Olis a call at (904) 269-7012 if you have any questions.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Thomas Trainor
Installation Manager

cc: D. Gaskins (SOUTHDIV)
D. Lancaster (NASJAX)

ABB Environmental Services, Inc.

08555-014

1536 Kingsley Avenue
Suite 127
Orange Park, Florida 32073

Telephone (904) 269-7012
Fax (904) 264-5632

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

U1G11705

Lab Name: QAL, Inc. Contract: U1120

Lab Code: LGN Case No.: JAX SAS No.: U1120 SDG No.: U1120

Matrix: (soil/water) WATER Lab Sample ID: G6276005

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 94M18Z13.D

Level: (low/med) LOW Date Received: 11/16/94

% Moisture: not dec. _____ Date Analyzed: 11/18/94 JHW 11/23/94

GC Column: RTX - 502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	21	
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	2	J
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
75-34-3	1,1-Dichloroethane	4	J
78-93-3	2-Butanone	23	
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
71-43-2	Benzene	55	
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	57	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	4	J
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	15	
1330-20-7	Xylene (Total)	7	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

U1G11705

Lab Name: QAL, INC. Contract: U1120

Lab Code: LGN Case No.: JAX SAS No.: U1120 SDG No.: U1120

Matrix: (soil/water) WATER Lab Sample ID: G6276005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 18MXS0901009.D

Level: (low/med) LOW Date Received: 11/16/94

% Moisture: _____ decanted: (Y/N)___ Date Extracted:11/17/94

Concentrated Extract Volume: 1000(UL) Date Analyzed: 11/18/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(-2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethyphenol	5	J
111-91-1	bis(-2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

U1G11705

Lab Name: QAL, INC. Contract: U1120

Lab Code: LGN Case No.: JAX SAS No.: U1120 SDG No.: U1120

Matrix: (soil/water) WATER Lab Sample ID: G6276005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 18MXS0901009.D

Level: (low/med) LOW Date Received: 11/16/94

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 11/17/94

Concentrated Extract Volume: 1000(UL) Date Analyzed: 11/18/94

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

SW846

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

U1G11705

Lab Name: QUANTERRA INC. Contract: -

Lab Code: QESOH Case No. 08555 SAS No.: SDG No.: U1G11

Matrix: (soil/water) WATER Lab Sample ID: A1DHV101

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 11/16/94

Extraction: (SepF/Cont/Sonc) CONT Date Extracted: 11/18/94

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 11/29/94

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.03	U
319-85-7	beta-BHC	0.06	U
319-86-8	delta-BHC	0.09	U
58-89-9	gamma-BHC(Lindane)	0.012	J
76-44-8	Heptachlor	0.03	U
309-00-2	Aldrin	0.04	U
1024-57-3	Heptachlor epoxide	0.83	U
959-98-8	Endosulfan I	0.14	U
60-57-1	Dieldrin	0.02	U
72-55-9	4,4'-DDE	0.04	U
72-20-8	Endrin	0.06	U
33213-65-9	Endosulfan II	0.04	U
72-54-8	4,4'-DDD	0.11	U
1031-07-8	Endosulfan sulfate	0.66	U
50-29-3	4,4'-DDT	0.12	U
72-43-5	Methoxychlor	1.8	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.23	U
5103-71-9	alpha-Chlordane	0.05	U
5103-74-2	gamma-Chlordane	0.05	U
8001-35-2	Toxaphene	2.4	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	0.65	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
2303-16-4	Diallate	1.0	U
510-15-6	Chlorobenzilate	1.0	U
465-73-6	Isodrin	0.10	U
143-50-0	Kepone	1.0	U

MODIFIED U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

U1G11705

Lab Name: QAL Contract: NAS_JAX

Lab Code: LGN Case No.: ABBES SAS No.: G6276 SDG No.: G6276

Matrix (soil/water): WATER Lab Sample ID: G6276005

Level (low/med): LOW Date Received: 11/16/94

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32.0	B		P
7440-36-0	Antimony	24.1	U		P
7440-38-2	Arsenic	29.0			F
7440-39-3	Barium	38.1	B		P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	2.1	U		P
7440-70-2	Calcium	15000			P
7440-47-3	Chromium	1.9	U		P
7440-48-4	Cobalt	2.6	U		P
7440-50-8	Copper	1.5	U		P
7439-89-6	Iron	12000			P
7439-92-1	Lead	1.3	U		F
7439-95-4	Magnesium	7760			P
7439-96-5	Manganese	72.6			P
7439-97-6	Mercury	0.02	U		CV
7440-02-0	Nickel	9.1	U		P
7440-09-7	Potassium	891	B		P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	15500			P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	2.5	U		P
7440-66-6	Zinc	161			P
	Cyanide				NR

Color Before: ORANGE Clarity Before: CLOUDY Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

THE "W" QUALIFIER INDICATES POSTSPIKE RECOVERY OUT OF CONTROL LIMITS.

11/27/94 16:45 904 462 1670 QAL INC. 017

Report of Analytical Results
INORGANICS

Date Collected: 11/15/94
Date Received: 11/16/94
Sample Matrix: Water
Sample Description: U1121

Client Sample ID: U1G11705
Lab ReferenceNum: G6275
Lab Sample ID: G6275001

CATEGORY NAME Analytical Parameter	Result	Units	Reporting Level	Date of Analysis	Analytical Method(s)
GENERAL					
pH	6.55	Units		11/16/94	EPA150.1
Alkalinity as CaCO3	42	mg/L	1.0	11/21/94	EPA310.1
Color	120	APHA	0.0	11/16/94	EPA110.2
Conductivity	213	umhos/cm	2.0	11/22/94	EPA120.1
Hardness as CaCO3	68	mg/L	1.0	11/22/94	EPA130.2
Total Dissolved Solids	148	mg/L	1.0	11/18/94	EPA160.1
Total Solids	176	mg/L	1.0		EPA160.3
Total Suspended Solids	24	mg/L	1.0		EPA160.2
Turbidity	108	NTU	0.2	11/16/94	EPA180.1
ANIONS					
Chloride	22	mg/L	1.0	11/17/94	EPA325.2
Fluoride	0.14	mg/L	0.01		EPA340.2
Sulfate	27	mg/L	1.0	11/22/94	EPA375.4
Sulfide	< 0.5	mg/L	0.5	11/17/94	EPA376.1
NUTRIENTS					
Ammonia-N	0.08	mg/L	0.04	11/18/94	EPA350.2
Nitrate-N	< 0.02	mg/L	0.02	11/16/94	EPA353.3/354.1
Nitrate/Nitrite-N	< 0.02	mg/L	0.02	11/18/94	EPA353.2
Nitrite-N	< 0.02	mg/L	0.02	11/16/94	EPA354.1
Total Kjeldahl Nitrogen	0.18	mg/L	0.04	11/21/94	EPA351.3
Total Nitrogen	0.18	mg/L	0.02		EPA351.3/353.3
Total Phosphate-P	0.03	mg/L	0.01	11/21/94	EPA365.2/365.4
DEMAND AND GENERAL ORGANIC					
BOD, 5 Day	< 2.0	mg/L	2.0	11/16/94	EPA405.1
Chemical Oxygen Demand	< 5.0	mg/L	5.0	11/22/94	EPA410.4
Oil and Grease	< 1.0	mg/L	1.0	11/21/94	EPA413.1
Total Organic Carbon	5.1	mg/L	1.0	11/21/94	EPA415.2
Total Petroleum Hydrocarbons	< 1.2	mg/L	1.2		EPA418.1
RADIOLOGICAL					
Gross Alpha	** Not Found **	**********	*******	11/28/94	EPA900.0
Gross Beta	** Not Found **	**********	*******	11/28/94	EPA900.0

(2516)

11/28/94 12:15 904 462 1670 QAL INC. 003