N60200.AR.001794
NAS CECIL FIELD, FL
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QUARTERLY REPORT FOR OPERATIONS AND MAINTENANCE OF SOIL VAPOR EXTRACTION/GROUNDWATER RECOVERY SYSTEM AT BUILDING 880 FOURTH QUARTER 1998 AND FIRST QUARTER 1999 NAS CECIL FIELD FL

4/1/1999

BECHTEL ENVIRONMENTAL INC

QUARTERLY REPORTS

FOR

OPERATIONS AND MAINTENANCE

BUILDING 880

NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA

Prepared for

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND

Under Contract No. N62467-93-D-0936

Prepared by

BECHTEL ENVIRONMENTAL, INC.

OAK RIDGE, TENNESSEE

APRIL 1999
REVISION 0
Bechtel Job No. 22567

Quarterly Operations and Maintenance Report

15756-

for NAS Jacksonville Building 880
Fourth Quarter 1998 & First Quarter 1999

Start Date: 10/5/98
End Date: 3/31/98
Report Date: 5/18/99

SITE BACKGROUND

The site is located at NAS Jacksonville at the NEX Service Station (hereinafter referred to as Building 880). The actual Building 880, associated with the Service Station construction, no longer exists. The NEX Service Station was constructed in 1975. Gasoline was stored in underground storage tanks at the site and dispensed for the purpose of motor vehicle refueling. A contamination assessment was conducted and a remedial action plan (RAP) was prepared and approved by the Florida Department of Environmental Protection (FDEP) to address the soil and groundwater impacts from the gasoline refueling operation. Subsequent to RAP approval, a soil vapor extraction (SVE)/groundwater recovery (GWR) system was installed at the site. System startup occurred on October 5, 1998.

DESCRIPTION OF TECHNOLOGIES UTILIZED

SVE and GWR are the remediation technologies utilized at Building 880.

SVE is a method by which negative pressure, or vacuum, is applied to vapor extraction laterals in the vadose zone. The actual removal is accomplished by lowering the relative pressure in the soil mass below the equilibrium pressure of the contaminant using a vacuum blower. The contaminant in the soil will volatilize and be removed via the soil vapor extraction laterals. At Building 880, soil vapors are extracted from a series of laterals. The extracted vapors are treated by two 2,000-lb granular activated carbon (GAC) units prior to being discharged to the atmosphere. A map showing the locations of the vapor extraction laterals is provided in Attachment A.

GWR is a method by which impacted groundwater is recovered, treated and discharged. At Building 880, groundwater is recovered by 2 recovery wells, a series of 18 manifolded extraction wells, and one recovery trench. The recovered groundwater is directed to the sanitary sewer for offsite treatment and discharge. A map showing the locations of the recovery wells and the recovery trench is provided in Attachment A.

SUMMARY OF ACTIVITIES

Monitoring Activities

General system maintenance checks were performed daily during the fourth quarter of 1998 and the first quarter of 1999. System operating parameters were recorded, and system adjustments were performed during each maintenance check. System operating parameters are tabulated in Attachment E.

Start Date: 10/5/98
End Date: 3/31/98
Report Date: 5/18/99

Sampling Activities

All samples collected during the fourth quarter of 1998 and the first quarter of 1999 were collected according to the startup-sampling regime. The startup-sampling regime consisted of collecting influent/effluent air and groundwater samples on a daily basis for the first one week (air) and two weeks (groundwater), twice weekly for the next week, weekly for the next month, and monthly for the next three-month period. The startup-sampling regime was completed during the first quarter of 1999. Post startup air and groundwater sampling will be conducted on a quarterly basis, beginning in the second quarter of 1999.

Air samples were collected from the GAC influent and effluent and analyzed by EPA Method TO-3. Groundwater samples were collected from the two recovery wells, the recovery trench, and the extraction well manifold and analyzed by EPA Method 602. Groundwater samples were collected from the discharge to the sanitary sewer and analyzed by EPA Method 602, Florida PRO, pH, and 8 RCRA total metals (unfiltered). The analytical results from the air and groundwater sampling events are summarized in Attachment B. The air and groundwater analytical laboratory reports are included in Attachments C and D, respectively.

GAC Unit Carbon Change-out

The carbon in both GAC units were replaced with new carbon on March 16, 1999. The amount of carbon in each GAC unit was increased from 1,000 lbs to 2,000 lbs per unit.

SUMMARY OF REMEDIATION SYSTEM PERFORMANCE

Operating Efficiencies

After construction was complete, initial startup of the SVE/GWR system was delayed due to operational problems with the sanitary sewer that was provided for groundwater effluent discharge. This sanitary sewer manhole was found to have been previously abandoned. In order to make this manhole operable, the Navy installed a sump pump in this manhole and ran a pipe from the sump pump discharge to an active manhole located near the pump islands. Presently, the groundwater effluent from the GWR system is discharged to the abandoned sanitary sewer manhole and then is pumped to the active manhole to enter the sanitary system for treatment.

The sanitary sewer system continued to experience operational problems after initial startup. Initially, the float switches that operate the sump pump in the abandoned manhole did not operate properly. After this problem was alleviated, the sump pump discharge pipe became fouled with iron, which restricted the discharge flow rate and ultimately caused the sump

pump to fail. The sanitary sewer discharge problems continued from initial startup on October 5, 1998 until March 22, 1999, when the sump pump was replaced. During this time, the GWR system was either shut down or operated at reduced capacity (due to the sanitary sewer problems), which affected the operating efficiencies of both the SVE and GWR systems.

Disregarding the downtime due to sanitary sewer problems, the ground water recovery system was in operation 78.7% of the time during the monitoring period. The individual operational efficiencies for each recovery well/trench are as follows:

Component	Possible Operating Days	Actual Operating Days	Operating %
RW-1	164	162	98.8%
RW-2	172	76	44.2%
RW-3	157	121	77.1%
RW-4	171	162	94.7%

The total number of days in the monitoring period was 178 days. However, the number of possible days of operation for each individual recovery well/trench were reduced by the actual days of downtime caused by the sanitary sewer problems. The remaining days of GWR system downtime were due to problems and failures experienced during startup due to the prolonged inactivity of the system while the sanitary sewer problem was remedied.

The SVE system was in operation 60% (73 out of 121 days) of the time during the monitoring period. The 48 days of downtime were due to numerous problems and failures experienced during start-up due to the prolonged inactivity of the system while the sanitary sewer problem was remedied.

Flow Rates

The average flow rate for the ground water remediation system was 8.3 gallons per minute (gpm) during the monitoring period, compared to the RAP design flow rate of 20 gpm. This flow rate is somewhat reduced due to the problems with the sanitary sewer. A total of 1,761,630 gallons of groundwater were recovered during the monitoring period. Individual well/trench recoveries and flow rates are tabulated in Appendix E.

The average flow rate for the SVE system was 402 cubic feet per minute (cfm) during the monitoring period at an average vacuum of 9.8 inches of mercury, compared to the RAP design of 560 cfm at 7.7 inches of mercury. Operating data for the SVE system are tabulated in Attachment E.

Start Date: 10 5 ·
End Date: 3/31 ·
Report Date: 5/18 ·

Estimated Contaminant Mass Removal Rates

The GWR system removed 2.9 lbs of contaminants (total volatile organics) from th groundwater during the fourth quarter of 1998 and the first quarter of 1999. The GWR systen groundwater contaminant mass removal rates are tabulated in Attachment E. The SVE systen removed 1,622 lbs of contaminants (total light petroleum hydrocarbons) from the soil durin the fourth quarter of 1998 and the first quarter of 1999. The SVE system contaminant mas removal rates are tabulated in Attachment E.

Status of Remediation

The GWR system is presently fully operational. The analytical results from the groundwater sampling indicate a decreasing trend in the concentration of benzene, ethylbenzene, toluene, total xylenes, total volatile organics, and methyl tert-butyl ether. The GWR system will continue operation, as contaminant levels still exceed FDEP No Further Action and Natural Attenuation limits.

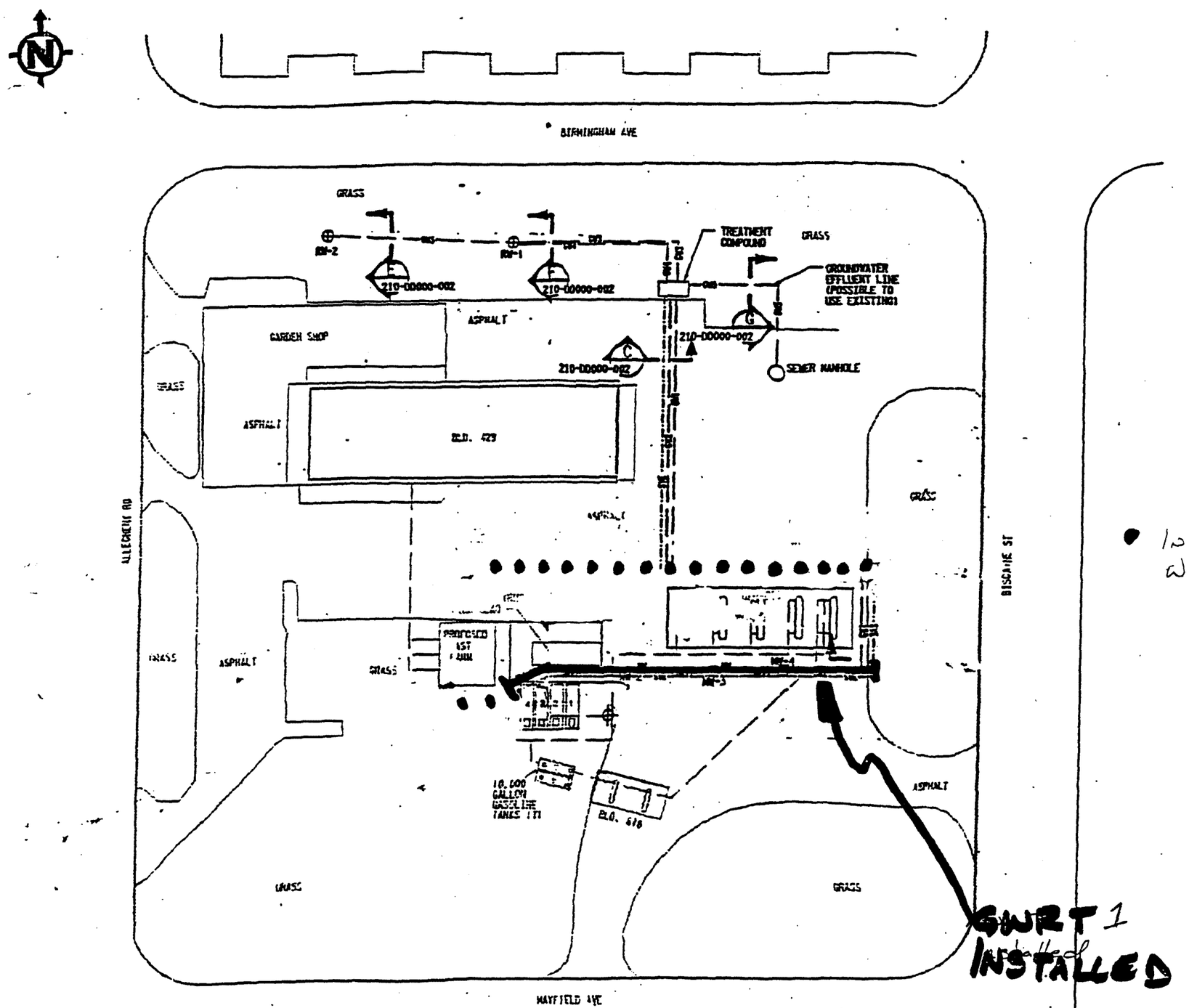
The SVE system is presently fully operational. The analytical results from the air sampling indicate a decreasing trend in the concentration of benzene, toluene, ethylbenzene, total xylenes, total volatile organics, and total light petroleum hydrocarbons. The SVE system will continue operation until non-detectable levels are reached in the influent air stream.

ATTACHMENTS

A. Site Map
B. Summary of Air and Groundwater Analytical Data
C. Analytical Laboratory Reports For Air Samples
D. Analytical Laboratory Reports For Groundwater Samples
E. System Performance Data

ATTACHMENT A

SITE MAP



NOTES

1. UNPAVED AREAS WITHIN 30' OF THE VAPOR EXTRACTION BE COVERED WITH 6 MIL PLASTIC WITH DECORATIVE GR GRAVEL).
2. SVE MANWAYS: MW-1, MW-2, MW-3, MW-6, MW-7, AND MW
3. GROUNDWATER RECOVERY TRENCH MANWAYS: MW-4 AND MW
4. UNDERGROUND STORAGE TANKS 1, 2, 3, 4 & 5 WILL BE AND REPLACED WITH THE PROPOSED ABOVE GROUND STORA FARM. (BY OTHERS)
5. ALL PIPING RUNS ARE BELOW GRADE. PIPE LINES SHOW STACKED VERTICALLY, RUNNING PARALLEL IN SOME TRENCH
6. SITE PIPING PLAN WAS BASED ON FIGURES 9 & 10 SITE OF THE NAS JACKSONVILLE - BUILDING 880 REMEDIAL AC ADDENDUM 2 BY HUST ENVIRONMENTAL & INFRASTRUCTURE, MARCH 1996.
7. PIEZOMETER WELLS ARE SPACED AT 10 FT, 20 FT, AND 3 INTERVALS FROM THE SVE HORIZONTAL WELLS. EACH SET PIEZOMETERS ARE APPROXIMATELY 60 FT APART AROUND T PERIMETER OF THE SVE WELLS.
8. GROUNDWATER LINES GW1, GW2, GW3 AND GW4 SHALL BE H TESTED TO 50 PSI FOR 2 HOURS. ALL INSTRUMENTS AND SHALL BE REMOVED FOR TESTING. NO PRESSURE LOSS SHA RECORDED.
9. FOR PULL BOXES LOCATION SEE DRAWING 210-00000-070. ADDITIONAL PULL BOXES SHALL BE AASHTO H20 LOAD RATED

REFERENCE DRAWINGS

LAYOUT SECTIONS	210
SVE MANWAY DETAIL AND SECTION	210-
GROUNDWATER RECOVERY WELL AND TRENCH DETAILS	210-
COMPOUND LAYOUT	210-
COMPOUND LAYOUT SECTIONS	210-
GROUNDWATER EXTRACTION SYSTEM P&ID	210-
SOIL VAPOR EXTRACTION (SVE) SYSTEM P&ID	210-

LEGEND

- PROPOSED SVE VACUUM HEADER
- PROPOSED SVE HORIZONTAL WELL (SLOTTED)
- PROPOSED GROUNDWATER PIPING
- PROPOSED GROUNDWATER RECOVERY TRENCH PIPING
- OTHER UNDERGROUND PIPING (EXISTING)
- RW-1 PROPOSED GROUNDWATER RECOVERY WELL
- MW-1 PROPOSED MANWAY
- PROPOSED PIEZOMETER WELL

0 40 80 120

1"=40'

	REVISED PIEZOMETERS (PRELIMIN			
1	REVISED FOR CLARIFICATION			
0	ISSUE FOR CONSTRUCTION			

BECHTEL ENVIRONMENTAL

OAK RIDGE, TENNESSEE

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION NAVAL FACILITIES ENGINEERING
CHARLESTON, SOUTH CAROLINA

NAS JACKSONVILLE - BUILDING 880
SITE PIPING PLAN

ATTACHMENT B

SUMMARY OF AIR AND GROUNDWATER ANALYTICAL DATA

SOIL VAPOR EXTRACTION SYSTEM
INFLUENT/EFFLUENT AIR TREATMENT ANALYTICAL RESULTS
BUILDING 880

Location	Date	Sample ID	Benzene (mg/m^3)	Toluene (mg/m^3)	Ethylbenzene (mg/m^3)	Total Xylenes (mg/m^3)	Total VOA (mg/m^3)	TLPH (mg/m^3)
Blower Discharge (influent) (V-4)	12/07/98	JX01117	44	48	30	150	272	1,300
	12/08/98	JX01126	34	39	23	126	222	1,000
	12/09/98	JX01134	42	52	34	123	251	760
	12/10/98	JX01136	38	50	34	113	235	740
	12/14/98	JX01141	19	26	18	101	164	670
	12/16/98	JX01151	23	27	18	106	174	760
	12/23/98	JX01177	7.7	14	4.3	23.9	49.9	210
	12/29/98	JX01185	16	20	15	89	140	580
	01/07/99	JX01192	7.2	12	8	57	84.2	290
	02/25/99	JX01240	<2.5	13	7.9	65	85.9	700
	03/29/99	JX01322	<2.5	5.6	2.5	24	32.1	500
Carbon Discharge (effluent) (GAC2SP)	12/07/98	JX01118	110	<25	<25	<25	110	1,800
	12/08/98	JX01127	100	47	<25	<25	147	2,000
	12/09/98	JX01135	54	52	<2.5	4.6	110.6	1,200
	12/10/98	JX01137	63	70	<12	<12	133	1,100
	12/14/98	JX01142	31	67	<12	<12	98	1,000
	12/16/98	JX01152	36	90	<12	<12	126	1,400
	12/23/98	JX01178	<12	18	30	72	120	500
	12/29/98	JX01186	<12	16	21	119	156	560
	01/07/99	JX01193	<12	<12	<12	100	100	360
	02/25/99	JX01241	<2.5	17	12	122	151	1,200
	03/29/99	JX01323	<0.50	<0.50	<0.50	<0.50	<0.50	18

mg/m^3 = milligram per cubic meter
Total VOA = Sum of Benzene, Toluene, Ethylbenzene and Total Xylenes
TLPH = Total Light Petroleum Hydrocarbons

GROUNDWATER RECOVERY SYSTEM
ANALYTICAL RESULTS
BUILDING 880

Sample Location	Date	BEI Sample ID	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	Total VOA (ug/L)	MTBE (ug/L)	FL PRO (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	pH (s.u.)
RW-1	11/23/98	JX01060	120	1.4	1.2	<1.0	122.6	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-1)	11/24/98	JX01065	120	1.8	6.1	<1.0	127.9	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01070	130	1.2	2.1	<1.0	133.3	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01084	94	1.3	2.2	<1.0	97.5	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	JX01090	320	3.8	14	<1.0	337.8	460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01097	86	<1.0	<1.0	<1.0	86	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01103	91	<1.0	<1.0	<1.0	91	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01111	110	1.8	2.5	<1.0	114.3	590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01129	110	1.7	<1.0	<1.0	111.7	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01146	79	<1.0	<1.0	<1.0	79	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/23/98	JX01172	63	2.9	4.5	<1.0	70.4	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/98	JX01181	52	<1.0	<1.0	<1.0	52	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/07/99	JX01188	59	2.6	3	<1.0	64.6	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/14/99	JX01198	24	<1.0	<1.0	<1.0	24	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01203	4	<1.0	<1.0	<1.0	4	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01235	46	6.9	9.1	<1.0	62	340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/29/99	JX01317	72	2.6	<1.0	<1.0	74.6	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RW-2	11/23/98	JX01061	1.2	<1.0	1	1.1	3.3	72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-2)	11/24/98	JX01066	1.5	<1.0	<1.0	<1.0	1.5	98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01071	<1.0	<1.0	<1.0	<1.0	<1.0	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01085	<1.0	<1.0	<1.0	<1.0	<1.0	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	JX01091	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01098	1.5	<1.0	<1.0	<1.0	1.5	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01104	<1.0	<1.0	<1.0	<1.0	<1.0	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01112	<1.0	<1.0	<1.0	<1.0	<1.0	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01130	<1.0	<1.0	<1.0	<1.0	<1.0	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01147	<1.0	<1.0	<1.0	<1.0	<1.0	64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01204	1.2	NA	NA	NA	1.2	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01236	6	<1.0	5	<1.0	11	93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/29/99	JX01318	<1.0	<1.0	<1.0	<1.0	<1.0	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

GROUNDWATER RECOVERY SYSTEM
ANALYTICAL RESULTS
BUILDING 880

Sample Location	Date	BEI Sample ID	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	Total VOA (ug/L)	MTBE (ug/L)	FL PRO (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	pH (s u)
RW-3	11/23/98	JX01062	410	130	120	440	1100	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-3)	11/24/98	JX01067	400	140	100	370	1010	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01072	420	120	88	370	998	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01086	350	130	100	390	970	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01099	290	67	64	253	674	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01105	230	64	63	217.5	574.5	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01113	110	80	63	244	497	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01131	280	100	83	350	813	61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01148	180	23	17	114	334	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/23/98	JX01174	120	65	51	178	414	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/98	JX01182	160	54	46	197	457	67	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/07/99	JX01189	9	2.4	5	3.9	20.3	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/14/99	JX01199	380	120	110	490	1100	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01205	230	79	71	306	686	71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01237	100	71	48	165	384	88	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/29/99	JX01319	220	82	47	223	572	<20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RW-4	11/23/98	JX01063	76	60	4.1	29	169.1	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-4)	11/24/98	JX01068	84	74	2.4	24	184.4	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01073	98	100	3.9	39.5	241.4	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01087	86	52	<10	32	170	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	JX01093	87	38	4	25	154	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01100	44	20	1 4	17	82 4	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01106	49	20	2	19	90	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01114	110	53	3 6	55 5	222 1	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01132	3 9	<1.0	<1 0	2 4	6 3	<2 0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01149	23	4 9	<1 0	9 2	37 1	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/23/98	JX01175	42	27	3 3	23.3	95 6	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/98	JX01183	34	21	1 7	18	74 7	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/07/99	JX01190	15	4 1	<1 0	4 8	23 9	2 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/14/99	JX01200	33	9	1 2	4 3	47 5	<2 0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

GROUNDWATER RECOVERY SYSTEM
ANALYTICAL RESULTS
BUILDING 880

Sample Location	Date	BEI Sample ID	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	Total VOA (ug/L)	MTBE (ug/L)	FL PRO (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	pH (s.u.)
RW-4	01/28/99	JX01206	57	57	3	35	152	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-4)	02/25/99	JX01238	88	74	54	159	375	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
continued	03/29/99	JX01320	28	11	2.5	14.3	55.8	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Combined	11/23/98	JX01064	100	40	17	73	230	70	<1.0	0.01	0.11	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<1.010	6.1
Discharge	11/24/98	JX01069	270	98	74	250	692	67	2.0	<0.010	0.12	<0.0010	<0.010	0.014	<0.00020	<0.010	<0.010	6.0
To Sanitary	11/25/98	JX01074	170	60	37	148	415	62	1.0	<0.010	0.11	<0.0010	<0.010	0.009	<0.00020	<0.010	<0.010	5.9
Sewer	11/30/98	JX01088	230	80	6	200	516	70	0.3	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.1
(SP-5)	12/01/98	JX01094	55	19	2.4	16	92.4	42	<0.20	<0.010	0.15	<0.0010	<0.010	0.009	<0.00020	<0.010	<0.010	6.0
	12/02/98	JX01101	110	32	21	102	265	50	0.5	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.2
	12/03/98	JX01107	73	16	11	47.2	147.2	45	<0.20	<0.010	0.13	<0.0010	<0.010	0.005	<0.00020	<0.010	<0.010	6.0
	12/07/98	JX01115	49	14	7	36.7	106.7	51	0.23	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.5
	12/09/98	JX01133	81	19	18	75	193	66	<0.20	0.01	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.4
	12/16/98	JX01150	100	11	6.2	35.7	152.9	61	0.23	<0.010	0.13	<0.0010	<0.010	0.015	<0.00020	<0.010	<0.010	5.8
	12/23/98	JX01176	80	37	25	94	236	28	0.5	0.022	<0.20	<0.0020	<0.020	<0.010	<0.00020	<0.020	<0.020	6.1
	12/29/98	JX01184	49	22	9	39	119	84	0.4	<0.010	<0.10	<0.0010	<0.010	0.008	<0.00020	<0.010	<0.010	6.1
	01/07/99	JX01191	11	2.4	1.1	4.9	19.4	8.4	<0.20	0.023	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.6
	01/14/99	JX01201	270	74	71	343	758	60	0.5	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.3
	01/28/99	JX01207	73	46	13	72	204	51	0.32	0.025	0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.1
	02/25/99	JX01239	65	38	21	85	209	36	0.30	<0.010	0.11	<0.0010	<0.010	<0.0050	<0.00020	<0.020	<0.010	6.3
	03/29/99	JX01321	22	7.9	2.6	16.2	48.7	120	<0.20	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	5.9

RW = recovery well

ug/L = microgram per liter

mg/L = milligram per liter

Total VOA = sum of benzene, ethylbenzene, toluene and total xylenes

MTBE = methyl tert-butyl ether

s.u. = standard pH units

ATTACHMENT C

ANALYTICAL LABORATORY REPORTS FOR AIR SAMPLES

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4480
DATE SUBMITTED: December 8, 1998
DATE REPORTED : December 22, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up Air

12/07/98

#1 - JX01117 @ 16:55
#2 - JX01118 @ 17:00

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4480
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01117		JX01118		Units
Benzene	44	D1	110	D2	mg/m^3
Toluene	48	D1	25 U	D2	mg/m^3
Ethylbenzene	30	D1	25 U	D2	mg/m^3
m-Xylene & p-Xylene	110	D1	25 U	D2	mg/m^3
o-Xylene	40	D1	25 U	D2	mg/m^3
Surrogate:	% RECOV		% RECOV		LIMITS
Bromofluorobenzene	115		95		72-127
Date Analyzed	12/10/98		12/10/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01117		JX01118		Units
TLPH	1300	D1	1800	D2	mg/m^3
Surrogate:	% RECOV		% RECOV		LIMITS
Bromofluorobenzene	115		95		73-127
Date Analyzed	12/10/98		12/10/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:25 dilution.
D2 = Analyte value determined from a 1:50 dilution.

ENCO LABORATORIES
REPORT # : JR4480
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	72-127
Date Analyzed	12/10/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	73-127
Date Analyzed	12/10/98	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4480
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	110/114/130	83-123	4	22
Toluene	111/114/127	89-110	3	11
Ethylbenzene	103/104/120	72-123	<1	20
o-Xylene	103/102/118	90-110	<1	28
EPA Method 18				
TLPH	110/114/130	83-123	4	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start-up Air Sampling

SEIR No: N/A
COC Number: JX269
Lab: ENCO
Field Logbook No.: JX-TA-10
Logbook Pg. No.: 23

Sampled by: W.J Canelos (Print) — W.J Canelos (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01117	ENV	AIR	12/7/98 / 16:55	01	N/A	15.0	TO-3	7 day	C
GAC25F	JX01118	"	"	" 17:00	01	N/A	15.0	TO-3	"	"

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J Canelos	C. Kohn	12/8/98	0730	TRANS TO Lab
C. Kohn	[illegible]	12/8/98	0800	Login Lab

COMMENTS/INSTRUCTIONS

JR4470

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Lab

Ship to: ENCO Labs in Jax FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173 421 for excepted radioactive material, limited quantity, n o s. UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173 421 for excepted radioactive material, limited quantity, n o s. UN2910

Environmental Conservation Laboratories
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Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4486
DATE SUBMITTED: December 9, 1998
DATE REPORTED : December 22, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up Air

12/08/98

#1 - JX01126 @ 14:50
#2 - JX01127 @ 14:55
#3 - JX01128 @ 15:00

PROJECT MANAGER Scott D. Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4486
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01126		JX01127		Units
Benzene	34	D1	100	D2	mg/m^3
Toluene	39	D1	47	D2	mg/m^3
Ethylbenzene	23	D1	25 U	D2	mg/m^3
m-Xylene & p-Xylene	93	D1	25 U	D2	mg/m^3
o-Xylene	33	D1	25 U	D2	mg/m^3
Surrogate:	% RECOV		% RECOV		LIMITS
Bromofluorobenzene	103		94		72-127
Date Analyzed	12/10/98		12/10/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01126		JX01127		Units
TLPH	1000	D1	2000	D2	mg/m^3
Surrogate:	% RECOV		% RECOV		LIMITS
Bromofluorobenzene	103		94		73-127
Date Analyzed	12/10/98		12/10/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:25 dilution.
D2 = Analyte value determined from a 1:50 dilution.

ENCO LABORATORIES
REPORT # : JR4486
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01128	LAB BLANK	Units
Benzene	12 U D1	0.50 U	mg/m^3
Toluene	12 U D1	0.50 U	mg/m^3
Ethylbenzene	12 U D1	0.50 U	mg/m^3
m-Xylene & p-Xylene	12 U D1	0.50 U	mg/m^3
o-Xylene	12 U D1	0.50 U	mg/m^3
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	97	98	72-127
Date Analyzed	12/10/98	12/10/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01128	LAB BLANK	Units
TLPH	250 U D1	10 U	mg/m^3
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	97	98	73-127
Date Analyzed	12/10/98	12/10/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:25 dilution due to matrix interference.

ENCO LABORATORIES
REPORT # : JR4486
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	110/114/130	83-123	4	22
Toluene	111/114/127	89-110	3	11
Ethylbenzene	103/104/120	72-123	<1	20
o-Xylene	103/102/118	90-110	<1	28
EPA Method 18				
TLPH	110/114/130	83-123	4	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start-up Air Sampling

SEIR No.: N/A
COC Number: JX271
Lab: ENCO
Field Logbook No.: JX-DA-10
Logbook Pg. No.: 24

Sampled by: W.J. Canelos (Print) W/ Canelos (Sign) (Print) (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01126	ENV	AIR	12-8-98 / 14:50	01	N/A	15.0	TO-3	7 day	C
GAC25P	JX01127	|	|	| 14:55	|	|	|	|	|	|
Carbon Drum	JX01128	|	|	| 15:00	|	|	|	|	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canelos	C. Kohn	12/9/98	0730	TRANS TO Lab
C. Kohn	[illegible]	12/9/98	0815	Login Lab

COMMENTS/INSTRUCTIONS

JR4478

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Lab

Ship to: ENCO Labs in Jax, FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4529
DATE SUBMITTED: December 10, 1998
DATE REPORTED : December 28, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up Air

12/09/98

#1 - JX01134 @ 13:15
#2 - JX01135 @ 13:20

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4529
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01134		JX01135		Units
Benzene	42	D1	54	D2	mg/m³
Toluene	52	D1	52	D2	mg/m³
Ethylbenzene	34	D1	2.5 U	D1	mg/m³
m-Xylene & p-Xylene	74	D2	4.6	D1	mg/m³
o-Xylene	49	D1	2.5 U	D1	mg/m³
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	108		110		72-127
Date Analyzed	12/11/98		12/11/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01134		JX01135		Units
TLPH	760	D2	1200	D2	mg/m³
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	108		110		73-127
Date Analyzed	12/11/98		12/11/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.
D2 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4529
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	72-127
Date Analyzed	12/11/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	73-127
Date Analyzed	12/11/98	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4529
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	114/116/111	83-123	2	22
Toluene	107/109/109	89-110	2	11
Ethylbenzene	97/ 98/104	72-123	1	20
o-Xylene	98/102/100	90-110	4	28
EPA Method 18				
TLPH	114/116/111	83-123	2	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Startup Air Sampling

SEIR No N/A
COC Number JX273
Lab ENCO
Field Logbook No. JX-RA-10
Logbook Pg. No.: 25

Sampled by: W.J. Canales (Print) W J Canales (Sign) _____ (Print) _____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01134	ENV	AIR	12-9-98 / 13:15	01	N/A	15.0	TO-3	7 day	C
GAC25F	JX01135	"	"	" 13:20	"	"	"	"	"	"

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W J Canales	C. Kohn	12/10/98	0735	Trans to Lab
C. Kohn	[illegible]	12/10/98	0817	Login Lab

COMMENTS/INSTRUCTIONS

JR4529

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U By ENCO Lab

Ship to: ENCO Labs in Jax, FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

tions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

15434-2

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4530
DATE SUBMITTED: December 10, 1998
DATE REPORTED : December 28, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up Air

12/10/98

#1 - JX01136 @ 13:15
#2 - JX01137 @ 13:20

PROJECT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4530
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01136		JX01137		Units
Benzene	38	D1	63	D1	mg/m³
Toluene	50	D1	70	D2	mg/m³
Ethylbenzene	34	D1	12 U	D2	mg/m³
m-Xylene & p-Xylene	66	D2	12 U	D2	mg/m³
o-Xylene	47	D1	12 U	D2	mg/m³
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	147#		102		72-127
Date Analyzed	12/11/98		12/11/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01136		JX01137		Units
TLPH	740	D2	1100	D2	mg/m³
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	100		102		73-127
Date Analyzed	12/11/98		12/11/98		

# = Surrogate recovery out of laboratory acceptable limits.
J = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.
D2 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4530
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m
Toluene	0.50 U	mg/m
Ethylbenzene	0.50 U	mg/m
m-Xylene & p-Xylene	0.50 U	mg/m
o-Xylene	0.50 U	mg/m
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	72-127
Date Analyzed	12/11/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m³
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	73-127
Date Analyzed	12/11/98	

U = Compound was analyzed for but not detected to the level shown.
- = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4530
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	114/116/111	83-123	2	22
Toluene	107/109/109	89-110	2	11
Ethylbenzene	97/ 98/104	72-123	1	20
o-Xylene	98/102/100	90-110	4	23
EPA Method 18				
TLPH	114/116/111	83-123	2	43

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start up Air Sampling

SEIR No.: N/A
COC Number: JX274
Lab: ENCO
Field Logbook No.: JX-SA-10
Logbook Pg. No.: 26

Sampled by: N.J. Canelas (Print) W/ Canelas (Sign) ____ (Print) ____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01136	ENV	AIR	12-10-98/13:15	01	N/A	15.0	TO-3	7 day	C
GAC25P	JX01137	1	1	1 13:20	1	1	1	1	1	1

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canelas	C. Cohn	12/10/98	1405	Transfer to Lab
C. Cohn	[illegible]	12/10/98	1410	Log in Lab

COMMENTS/INSTRUCTIONS

JR4530

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Lab

Ship to: ENCO Labs in Jax, FL

Airbill No ____ Traffic Report No: ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n o s UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n o s UN2910

Environmental Conservation Laboratories
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Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E32277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4604
DATE SUBMITTED: December 15, 1998
DATE REPORTED : December 28, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up Air

12/14/98

#1 - JX01141 @ 16:10
#2 - JX01142 @ 16:15

PROJECT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4604
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01141		JX01142		Units
Benzene	19	D1	31	D1	mg/m
Toluene	26	D1	67	D1	mg/m
Ethylbenzene	18	D1	12 U	D1	mg/m
m-Xylene & p-Xylene	75	D1	12 U	D1	mg/m
o-Xylene	26	D1	12 U	D1	mg/m
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	102		95		72-127
Date Analyzed	12/17/98		12/17/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01141		JX01142		Units
TLPH	670	D1	1000	D1	mg/m
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	102		95		73-127
Date Analyzed	12/17/98		12/17/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4604
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m³
Toluene	0.50 U	mg/m³
Ethylbenzene	0.50 U	mg/m³
m-Xylene & p-Xylene	0.50 U	mg/m³
o-Xylene	0.50 U	mg/m³
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	72-127
Date Analyzed	12/17/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m³
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	73-127
Date Analyzed	12/17/98	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4604
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	114/116/124	83-123	2	22
Toluene	107/109/122	89-110	2	11
Ethylbenzene	97/ 98/116	72-123	1	20
o-Xylene	98/102/109	90-110	4	28
EPA Method 18				
TLPH	114/116/124	83-123	2	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Startup Air Sampling

SEIR No: N/A
COC Number: JX277
Lab: ENCO
Field Logbook No.: JX-FA-10
Logbook Pg. No.: 28

Sampled by: W.J. Canales (Print) — W.J. Canales (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01141	ENV	AIR	12-14-98 / 16:10	01	N/A	15.0	TO-3	7 day	C
GAC 2SP	JX01142	"	"	" 16:15	"	"	"	"	"	"

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canales	C. Logan	12/15/98	0740	TRANS TO LAB
C. Logan	[illegible]	12/15/98	0815	Log in lab

COMMENTS/INSTRUCTIONS

JR 46604

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U By ENCO Lab

Ship to: ENCO Labs in Jax, FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173 421 for excepted radioactive material, limited quantity, n o s , UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173 421 for excepted radioactive material, limited quantity, n o s UN2910

15431-2

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Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4647
DATE SUBMITTED: December 17, 1998
DATE REPORTED : December 28, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up Air

12/16/98

#1 - JX01151 @ 11:50
#2 - JX01152 @ 11:55

PROJECT MANAGER Scott D Mart
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4647
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01151		JX01152		Units
Benzene	23	D1	36	D1	mg/m³
Toluene	27	D1	90	D1	mg/m³
Ethylbenzene	18	D1	12 U	D1	mg/m³
m-Xylene & p-Xylene	78	D1	12 U	D1	mg/m³
o-Xylene	28	D1	12 U	D1	mg/m³
Surrogate:	% RECOV		% RECOV		LIMITS
Bromofluorobenzene	107		100		72-127
Date Analyzed	12/17/98		12/17/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01151		JX01152		Units
TLPH	760	D1	1400	D1	mg/m³
Surrogate:	% RECOV		% RECOV		LIMITS
Bromofluorobenzene	107		100		73-127
Date Analyzed	12/17/98		12/17/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4647
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	72-127
Date Analyzed	12/17/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	73-127
Date Analyzed	12/17/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4647
DATE REPORTED: December 28, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	114/116/124	83-123	2	22
Toluene	107/109/122	89-110	2	11
Ethylbenzene	97/ 98/116	72-123	1	20
o-Xylene	98/102/109	90-110	4	28
EPA Method 18				
TLPH	114/116/124	83-123	2	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building PPO
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start up Air Sample

SEIR No: N/A
COC Number: ~~JAX~~ JX 281
Lab: ENCO
Field Logbook No.: JX-DA-010
Logbook Pg. No.: 29

Sampled by: W J. Canelos (Print) — W J Canelos (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V-4	JX01151	ENV	Air	12/16/98/11:50	01	N/A	15.0	TO3	7 Days	C
GAC25P	JX01152	"	"	" 11:55	01	"	"	"	"	"

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W J Canelos	C. Kohn	12/17/98	0730	Trans to Lab
C. Kohn	David W. [illegible]	12/17/98	0830	Log in lab

COMMENTS/INSTRUCTIONS

JR 4647

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO LAB

Ship to: ENCO LABS in Jax, Fl.

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

15437-2

Environmental Conservation Laboratories
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Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4742
DATE SUBMITTED: December 24, 1998
DATE REPORTED : December 30, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Weekly Air

12/23/98

#1 - JX01177 @ 14:45
#2 - JX01178 @ 14:45

PROJECT MANAGER _____
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4742
DATE REPORTED: December 30, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01177		JX01178		Units
Benzene	7.7	D1	12 U	D2	mg/m^3
Toluene	14	D1	18	D2	mg/m^3
Ethylbenzene	4.3	D1	30	D2	mg/m^3
m-Xylene & p-Xylene	18	D1	72	D2	mg/m^3
o-Xylene	5.9	D1	12 U	D2	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	96		119		72-127
Date Analyzed	12/28/98		12/28/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01177		JX01178		Units
TLPH	210	D1	500	D2	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	96		119		73-127
Date Analyzed	12/28/98		12/28/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.
D2 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4742
DATE REPORTED: December 30, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	129*	72-127
Date Analyzed	12/28/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	129*	73-127
Date Analyzed	12/28/98	

* Surrogate recovery outside established limits.
Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4742
DATE REPORTED: December 30, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	104/105/105	83-123	<1	22
Toluene	101/102/104	89-110	<1	11
Ethylbenzene	87/ 89/103	72-123	2	20
o-Xylene	82/ 84/100	90-110	2	28
EPA Method 18				
TLPH	104/105/105	83-123	<1	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building F80
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Weekly Air Sample

SEIR No.: N/A
COC Number: JX 288
Lab: ENCO
Field Logbook No.: JX-DA-010
Logbook Pg. No.: 33

Sampled by: Ronald Lockwood (Print) [signature] (Sign) _____ (Print) _____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V-4	JX01177	ENV	Air	12/23/98 2:45	01	N/A	15.0	TO3	7 Day	C
GAC-2Sp	JX01178	1	1	12/23/98 2:50	01	1	1	1	1	1

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
[signature]	C Cohn	12/24/98	815	Trans to lab
C. Cohn	[signature]	12/24/98	900	Login lab

COMMENTS/INSTRUCTIONS

JR4742

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO LAB

Ship to: ENCO LABS in Jax, Fl

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4773
DATE SUBMITTED: December 29, 1998
DATE REPORTED : January 4, 1999

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

BLDG 880

12/29/98

#1 - JX01185 @ 11:20
#2 - JX01186 @ 11:23

PROJECT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4773
DATE REPORTED: January 4, 1999
PROJECT NAME : BLDG 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01185		JX01186		Units
Benzene	16	D1	12 U	D2	mg/m³
Toluene	20	D1	16	D2	mg/m³
Ethylbenzene	15	D1	21	D2	mg/m³
m-Xylene & p-Xylene	66	D1	100	D2	mg/m³
o-Xylene	23	D1	19	D2	mg/m³
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	*		*		72-127
Date Analyzed	12/30/98		12/30/98		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01185		JX01186		Units
TLPH	580	D1	560	D2	mg/m³
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	*		*		73-127
Date Analyzed	12/30/98		12/30/98		

* = Surrogate recovery unavailable due to matrix interference.
U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.
D2 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4773
DATE REPORTED: January 4, 1999
PROJECT NAME : BLDG 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	129#	72-127
Date Analyzed	12/30/98	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	129#	73-127
Date Analyzed	12/30/98	

# Surrogate recovery outside established limits.
U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4773
DATE REPORTED: January 4, 1999
PROJECT NAME : BLDG 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	104/105/113	83-123	<1	22
Toluene	101/102/111	89-110	<1	11
Ethylbenzene	87/ 89/110	72-123	2	20
o-Xylene	82/ 84/104	90-110	2	28
EPA Method 18				
TLPH	104/105/113	83-123	<1	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Bldg 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: weekly Air Samples

SEIR No.: N/A
COC Number: JX 292
Lab: ENCO
Field Logbook No.: JX-OA-010
Logbook Pg. No.: pg 36

Sampled by: Ronald Lockwood (Print) Ronald Lockwood (Sign) _____ (Print) _____ (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V-4	JX01185	ENV	Air	12/29/98 11:20	01	NA	15.0	TO3	7 Day	C
Gac-25P	JX01186	"	"	12/29/98 11:23	01	"	"	"	"	"

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Robert Zahn	C. Kohn	12/30/98	14:00	TRANS TO LAB
C. Kohn		12/30/98	17:00	Login Lab

COMMENTS/INSTRUCTIONS

JR 4773

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO LAB

Ship to: ENCO lab in Jax Fl

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173 421 for excepted radioactive material, limited quantity, n o s UN2910

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4889
DATE SUBMITTED: January 7, 1999
DATE REPORTED : January 14, 1999

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Weekly Air

01/07/99

#1 - JX01192 @ 11:30
#2 - JX01193 @ 11:35

PROJECT MANAGER Scott D Mart
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4889
DATE REPORTED: January 14, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01192		JX01193		Units
Benzene	7.2	D1	12 U	D2	mg/m^3
Toluene	12	D1	12 U	D2	mg/m^3
Ethylbenzene	8.0	D1	12 U	D2	mg/m^3
m-Xylene & p-Xylene	40	D1	72	D2	mg/m^3
o-Xylene	17	D1	28	D2	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	*		119		72-127
Date Analyzed	01/08/99		01/08/99		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01192		JX01193		Units
TLPH	290	D1	360	D2	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	*		119		73-127
Date Analyzed	01/08/99		01/08/99		

* = Surrogate recovery unavailable due to matrix interference.
J = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.
D2 = Analyte value determined from a 1:25 dilution.

ENCO LABORATORIES
REPORT # : JR4889
DATE REPORTED: January 14, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly Air

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	126	72-127
Date Analyzed	01/08/99	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	126	73-127
Date Analyzed	01/08/99	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4889
DATE REPORTED: January 14, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly Air

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	110/115/104	83-123	4	22
Toluene	#110/113/102	89-110	3	11
Ethylbenzene	95/ 98/102	72-123	3	20
o-Xylene	95/ 99/104	90-110	4	28
EPA Method 18				
TLPH	110/115/104	83-123	4	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

= One or more of the associated values failed to meet laboratory established criteria for accuracy.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Bldg 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Weekly Air Samples

SEIR No.: N/A
COC Number: JX295
Lab: ENCO
Field Logbook No.: JX-DA-010
Logbook Pg. No.: Pg 38

Sampled by: Ronald Lockwood (Print) Ronald Lockwood (Sign) _____ (Print) _____ (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V-4	JX01192	ENV	Air	1/7/99 11:30	01	N/A	15.0	TO3	7 Day	C
GAC-LSP	JX01193	"	"	1/7/99 11:35	01	"	"	"	"	"

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Ronald Lockwood	C. Kohn	1/7/99	1400	Trans To Lab
C. Kohn	[illegible]	1/7/99	1700	Login Lab

COMMENTS/INSTRUCTIONS

JK4789

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by Enco LAB

Ship to: Enco LAB in JAX

Airbill No. _____ Traffic Report No.: _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR5611
DATE SUBMITTED: February 25, 1999
DATE REPORTED : March 5, 1999

ATTENTION: Mr. Ron Boardman

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: WO# JX030

Bldg. 880

02/25/99

#1 - JXO1240 @ 14:00 — Influent
#2 - JXO1241 @ 14:10 — Effluent

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR5611
DATE REPORTED: March 5, 1999
REFERENCE : *WO# JX030*
PROJECT NAME : Bldg. 880

PAGE 2 OF 4

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	Influent JX01240		Effluent JX01241		Units
Benzene	2.5 U	D1	2.5 U	D1	mg/m^3
Toluene	13	D1	17	D1	mg/m^3
Ethylbenzene	7.9	D1	12	D1	mg/m^3
m-Xylene & p-Xylene	45	D1	81	D1	mg/m^3
o-Xylene	20	D1	41	D1	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	106		91		72-127
Date Analyzed	02/26/99		02/26/99		

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01240		JX01241		Units
TLPH	700	D1	1200	D1	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	106		91		73-127
Date Analyzed	02/26/99		02/26/99		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR5611
DATE REPORTED: March 5, 1999
REFERENCE : WO# JX030
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	72-127
Date Analyzed	02/26/99	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	98	73-127
Date Analyzed	02/26/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5611
DATE REPORTED: March 5, 1999
REFERENCE : WO# JX030
PROJECT NAME : Bldg. 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	#124/119/122	83-123	4	22
Toluene	#118/110/118	89-110	7	11
Ethylbenzene	#124/117/115	72-123	6	20
o-Xylene	#132/135/114	90-110	2	28
EPA Method 18				
TLPH	#124/119/122	83-123	4	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

= One or more of the associated values failed to meet laboratory established criteria for accuracy.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Site Name: NAS Jacksonville
Delivery Order No.: 27
Cooler/Crate No.: NA

SEIR No.: NA
COC Number: JX 310
Lab: Enco
Field Logbook No.: JX DA 010
Logbook Pg. No.: Pg 48

Sampled by: Ron Boardman (Print) [signature] (Sign) ____ (Print) ____ (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

- S Sample Results and QC
- C Reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01240	ENV	AIR	2-25-99 1400	01	14 A	15.0	TO-3	7 Day	C
GAC25P	JX01241	/	/	2-25-99 1410	01	/	/	/	/	/

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
[signature]	[signature]	2-25-99	1430	Tran to Lab
	[signature]	2-25-99	1445	

COMMENTS/INSTRUCTIONS

~~JR 5/6/99~~ JW JR 5/6/11

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick up by Lab

Ship to: Enco Lab

Airbill No ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR6020
DATE SUBMITTED: March 30, 1999
DATE REPORTED : April 5, 1999

ATTENTION: Mr. Ron Boardman

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

WO# 073

Bldg. 880

03/29/99

#1 - JX01322 @ 11:30
#2 - JX01323 @ 11:40

PROJECT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR6020
DATE REPORTED: April 5, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01322		JX01323	Units
Benzene	2.5 U	D1	0.50 U	mg/m^3
Toluene	**5.6**	D1	0.50 U	mg/m^3
Ethylbenzene	**2.5**	D1	0.50 U	mg/m^3
m-Xylene & p-Xylene	**17**	D1	0.50 U	mg/m^3
o-Xylene	**7.0**	D1	0.50 U	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	89		90	72-127
Date Analyzed	04/01/99		04/01/99	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01322		JX01323	Units
TLPH	**500**	D1	**18**	mg/m^3
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	89		90	73-127
Date Analyzed	04/01/99		04/01/99	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR6020
DATE REPORTED: April 5, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	94	72-127
Date Analyzed	04/01/99	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	94	73-127
Date Analyzed	04/01/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6020
DATE REPORTED: April 5, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	#120/129/119	83-123	7	22
Toluene	#126/127/114	89-110	<1	11
Ethylbenzene	104/105/117	72-123	<1	20
o-Xylene	105/102/116	90-110	3	28
EPA Method 18				
TLPH	#120/129/119	83-123	7	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

= One or more of the associated values failed to meet laboratory established criteria for accuracy.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Site Name: NAS Jacksonville - Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A

SEIR No.: N/A
COC Number: JX 332
Lab: ENCO
Field Logbook No.: JX-DA-013
Logbook Pg. No.: 16-17

Sampled by: Ron Boardman (Print) R. Boardman/Lyl (Sign) _____ (Print) _____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample results, blanks, and calibration reported
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01322	ENV	AIR	3-29-99/ 11:30	01	N/A	15.0	TO-3	7 day	C
GAC2SP	JX01323	|	|	| 11:40	01	N/A	15.0	TO-3	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canelos	C. Kohn	3/30/99	11:30	Transport to Lab for Analysis
C. Kohn	Scott D Mat	3/30/99	1200	Log in Lab

COMMENTS/INSTRUCTIONS
Results to: Bill Canelos
JR 6020

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by ENCO Labs
Ship to: ENCO Labs in Jacksonville FL

Airbill No. _____ Traffic Report No. _____

ATTACHMENT D

ANALYTICAL LABORATORY REPORTS FOR GROUNDWATER SAMPLES

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No FH2277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4237
DATE SUBMITTED: November 24, 1998
DATE REPORTED : December 15, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up GW Sampling - Day 1

11/23/98

#1 - JX01060 @ 16:30
#2 - JX01061 @ 16:35
#3 - JX01062 @ 16:40
#4 - JX01063 @ 16:45
#5 - JX01064 @ 16:50

PROJECT MANAGER Scott D. Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4237
DATE REPORTED: December 15, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW Sampling

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01060		JX01061	Units
Methyl tert-butyl ether	200	D1	72	µg/L
Benzene	120	D1	1.2	µg/L
Toluene	1.2 I		1.0 I	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	1.4		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.1 I	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	99		97	59-132
Date Analyzed	11/28/98		11/29/98	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4237
DATE REPORTED: December 15, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW Sampling

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01062		JX01063	Units
Methyl tert-butyl ether	2.0 U		2.0 U	µg/L
Benzene	410	D2	76	µg/L
Toluene	120		4.1	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	130	D2	60	µg/L
m-Xylene & p-Xylene	330	D2	29	µg/L
o-Xylene	110		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	98		*	59-132
Date Analyzed	11/29/98		11/29/98	

* = Surrogate recovery unavailable due to matrix interference.
U = Compound was analyzed for but not detected to the level shown.
D2 - Analyte value determined from a 1:20 dilution.

ENCO LABORATORIES
REPORT # : JR4237
DATE REPORTED: December 15, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW Sampling

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01064		LAB BLANK	Units
Methyl tert-butyl ether	70	D1	2.0 U	µg/L
Benzene	100	D1	1.0 U	µg/L
Toluene	17	D1	1.0 U	µg/L
Chlorobenzene	10 U	D1	1.0 U	µg/L
Ethylbenzene	40	D1	1.0 U	µg/L
m-Xylene & p-Xylene	60	D1	1.0 U	µg/L
o-Xylene	13	D1	1.0 U	µg/L
1,3-Dichlorobenzene	10 U	D1	1.0 U	µg/L
1,4-Dichlorobenzene	10 U	D1	1.0 U	µg/L
1,2-Dichlorobenzene	10 U	D1	1.0 U	µg/L
Surrogate:	% RECOV		% RECOV	LIMITS
Bromofluorobenzene	115		116	59-132
Date Analyzed	11/29/98		11/28/98	

EPA METHOD 418.1 - TOTAL PETR. HYDROCARBONS	JX01064	LAB BLANK	Units
Total Petr. Hydrocarbons	1.0 U	1.0 U	mg/L
Date Analyzed	11/25/98	11/25/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4237
DATE REPORTED: December 15, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW Sampling

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01064	LAB BLANK	Units
Arsenic	200.7	0.010 I	0.010 U	mg/L
Date Analyzed		12/01/98	12/01/98	
Barium	200.7	0.11	0.10 U	mg/L
Date Analyzed		12/01/98	12/01/98	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		12/01/98	12/01/98	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/01/98	12/01/98	
Lead	200.7	0.0050 U	0.0050 U	mg/L
Date Analyzed		12/01/98	12/01/98	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		11/30/98	11/30/98	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/01/98	12/01/98	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/03/98	12/03/98	
MISCELLANEOUS	**METHOD**	**JX01064**	**LAB BLANK**	**Units**
pH	150.1	6.1	NR	S.U.
Date Analyzed		11/24/98		

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4237
DATE REPORTED: December 15, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW Sampling

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	117	59-132
Date Analyzed	11/29/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4237
DATE REPORTED: December 15, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW Sampling

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	*/ */ 85	60-138	*	17
Toluene	103/104/ 90	57-138	<1	16
Ethylbenzene	109/101/ 92	49-144	8	17
o-Xylene	100/ 99/ 93	50-151	1	17
EPA Method 418.1				
Total Petr. Hydrocarbons	NA/ NA/103	-	NA	
Total Metals				
Arsenic, 200.7	93/ 93/ 92	64-126	<1	12
Barium, 200.7	91/ 92/ 91	74-119	1	11
Cadmium, 200.7	93/ 93/ 94	68-121	<1	12
Chromium, 200.7	96/ 97/ 96	73-120	1	10
Lead, 200.7	90/ 91/ 91	68-126	1	19
Mercury, 245.1	113/111/109	70-136	2	12
Selenium, 200.7	99/ 99/ 96	65-129	<1	10
Silver, 200.7	103/105/105	69-121	2	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	

Environmental Conservation Laboratories Comprehensive QA Plan #960038

* = MS/MSD/RPD unavailable due to high original sample concentration.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 279
Cooler/Crate No.:
Sampling Event:: Start-up Groundwater Sampling

SEIR No.: N/A
COC Number: JX255
Lab: ENCO
Field Logbook No.: JX-PA-002
Logbook Pg. No.: 36 - 40

Sampled by: W.J. Canelos (Print) W.J. Canelos (Sign) ____ (Print) ____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blank Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01060	ENV	GWT	11/23/98 / 16:30	01 : 02	HCl	1.1	602	7 day	C
SP-2	JX01061			11/23/98 / 16:35	01 : 02	HCl	1.1	602		
SP-3	JX01062			11/23/98 / 16:40	01 : 02	HCl	1.1	602		
SP-4	JX01063			11/23/98 / 16:45	01 : 02	HCl	1.1	602		
SP-5	JX01064			11/23/98 / 16:50	01 : 02	HCl	1.1	602		
SP-5	JX01064			11/23/98 / 16:50	03	H_2SO_4	3.1	TRPH		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canelos	C. Kohn	11/24/98	0730	TRANS TO Lab
C. Kohn	[illegible]	11/24/98	0800	Login LAS

COMMENTS/INSTRUCTIONS

JK 4237

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by ENCO Lab

Ship to: ENCO Labs in Jacksonville, FL

Airbill No. ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

COC Number JX255

CHAIN OF CUSTODY RECORD (Continued)

Page 2 of 2

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01064	ENV	GWT	11/23/98/16:38	04	None	5.0	pH	7 day	C
SP-5	JX01064	1	1	1 1	05	HNO_3	6.0	RCRA Total Metals	1	1

D:\NAVY-RAC\COCR.NUM

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4292
DATE SUBMITTED: November 25, 1998
DATE REPORTED : December 17, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up GW -Day 2

11/24/98

#1 - JX01065 @ 15:20
#2 - JX01066 @ 15:25
#3 - JX01067 @ 15:30
#4 - JX01068 @ 15:35
#5 - JX01069 @ 15:40

PROJECT MANAGER _____ Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4292
DATE REPORTED: December 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 2

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01065		JX01066	Units
Methyl tert-butyl ether	200	D1	98	µg/L
Benzene	120		1.5	µg/L
Toluene	6.1		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	1.8		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	104		97	59-132
Date Analyzed	11/29/98		11/29/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4292
DATE REPORTED: December 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 2

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01067		JX01068	Units
Methyl tert-butyl ether	52		12	µg/L
Benzene	400	D1	84	µg/L
Toluene	100		2.4	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	140	D1	74	µg/L
m-Xylene & p-Xylene	280	D1	24	µg/L
o-Xylene	90		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	94		*166	59-132
Date Analyzed	11/30/98		11/30/98	

* - Surrogate recovery outside established limits.
U - Compound was analyzed for but not detected to the level shown.
D1 - Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4292
DATE REPORTED: December 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 2

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01069		LAB BLANK	Units
Methyl tert-butyl ether	67		2.0 U	µg/L
Benzene	270	D2	1.0 U	µg/L
Toluene	74		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	98		1.0 U	µg/L
m-Xylene & p-Xylene	180		1.0 U	µg/L
o-Xylene	70		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	99		97	59-132
Date Analyzed	11/30/98		11/29/98	

EPA METHOD 418.1 - TOTAL PETR. HYDROCARBONS	JX01069	LAB BLANK	Units
Total Petr. Hydrocarbons	2.0 I	1.0 U	mg/L
Date Analyzed	12/07/98	12/07/98	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).
D2 - Analyte value determined from a 1:20 dilution.

ENCO LABORATORIES
REPORT # : JR4292
DATE REPORTED: December 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 2

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01069	LAB BLANK	Units
Arsenic	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Barium	200.7	**0.12**	0.10 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Lead	200.7	**0.014**	0.0050 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		11/30/98	11/30/98	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
MISCELLANEOUS	**METHOD**	**JX01069**	**LAB BLANK**	**Units**
pH	150.1	**6.0**	NA	S.U.
Date Analyzed		11/25/98		

U = Compound was analyzed for but not detected to the level shown.
NA = Analysis not applicable to this sample.

ENCO LABORATORIES
REPORT # : JR4292
DATE REPORTED: December 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 2

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	95/108/ 68	60-138	13	17
Toluene	87/ 91/ 59	57-138	4	16
Ethylbenzene	95/100/ 58	49-144	5	17
o-Xylene	98/ 96/ 66	50-151	2	17
EPA Method 418.1				
Total Petr. Hydrocarbons	88/108/103	63-126	*20	16
Total Metals				
Arsenic, 200.7	95/ 95/ 96	64-126	<1	12
Barium, 200.7	92/ 92/ 95	74-119	<1	11
Cadmium, 200.7	96/ 96/ 97	68-121	<1	12
Chromium, 200.7	96/ 96/ 98	73-120	<1	10
Lead, 200.7	94/ 95/ 97	68-126	1	17
Mercury, 245.1	110/111/112	70-136	<1	12
Selenium, 200.7	102/103/102	65-129	<1	10
Silver, 200.7	101/101/102	69-121	<1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	

Environmental Conservation Laboratories Comprehensive QA Plan #960038

* - The associated value failed to meet laboratory established criteria for precision.
< = Less Than
MS = Matrix Spike
MSD - Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 279
Cooler/Crate No.: N/A
Sampling Event: Start-up Groundwater Sampling - Day 2

SEIR No: N/A
COC Number: JX256
Lab: ENCO
Field Logbook No.: JX-VA-002
Logbook Pg. No.:

Sampled by: W.J. Canales (Print) — W.J. Canales (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis: sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01065	ENV	GWT	11/24/98 / 15:20	01 : 02	HCl	1.1	602	7 day	C
SP-2	JX01066	|	|	15:25	|	|	|	|	|	|
SP-3	JX01067	|	|	15:30	|	|	|	|	|	|
SP-4	JX01068	|	|	15:35	|	|	|	|	|	|
SP-5	JX01069	|	|	15:40	|	|	|	|	|	|
SP-5	JX01069	|	|	15:40	03	H_2SO_4	3.1	TRPH	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canales	C. Kohn	11/24/98	7:25	Transit to Lab
C. Kohn	[illegible]	11/24/98	12:30	Log in lab

COMMENTS/INSTRUCTIONS

JA 4292

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by ENCO Lab

Ship to: ENCO Labs in Jacksonville, FL

Airbill No: _____ Traffic Report No.: _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

COC Number JX256

CHAIN OF CUSTODY RECORD (Continued)

Page 2 of 2

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01069	ENV	GWT	11/24/98 / 0:10	04	none	5.0	pH	7 day	C
SP-5	JX01069	1	1	1 1	05	HNO_3	6.0	8 RCRA Total metals	1	1

O:\NAVY-RAC\COCR NUM

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4293
DATE SUBMITTED: November 25, 1998
DATE REPORTED : February 17, 1998

PAGE 1 OF 7

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up GW -Day 3

11/25/98

#1 JX01070 @ 11:20
#2 JX01071 @ 11:25
#3 - JX01072 @ 11:30
#4 - JX01073 @ 11:35
#5 - JX01074 @ 11:40

PROJECT MANAGER Scott D. Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4293
DATE REPORTED: February 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 3

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01070		JX01071	Units
Methyl tert-butyl ether	**200**	D1	**110**	µg/L
Benzene	**130**	D1	1.0 U	µg/L
Toluene	**2.1**		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	**1.2**		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	103		102	59-132
Date Analyzed	11/29/98		11/29/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4293
DATE REPORTED: February 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 3

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01072		JX01073	Units
Methyl tert butyl ether	50 U	D2	19	µg/L
Benzene	420	D2	98	µg/L
Toluene	88	D2	3.9	µg/L
Chlorobenzene	20 U	D2	1.0 U	µg/L
Ethylbenzene	120	D2	100	µg/L
m-Xylene & p-Xylene	280	D2	38	µg/L
o-Xylene	90	D2	1.5	µg/L
1,3-Dichlorobenzene	20 U	D2	1.0 U	µg/L
1,4-Dichlorobenzene	20 U	D2	1.0 U	µg/L
1,2-Dichlorobenzene	20 U	D2	1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	100		91	59-132
Date Analyzed	12/01/98		11/29/98	

U = Compound was analyzed for but not detected to the level shown.
D2 = Analyte value determined from a 1:20 dilution.

ENCO LABORATORIES
REPORT # : JR4293
DATE REPORTED: February 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 3

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01074		LAB BLANK	Units
Methyl tert-butyl ether	62		2.0 U	µg/L
Benzene	170	D1	1.0 U	µg/L
Toluene	37		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	60		1.0 U	µg/L
m-Xylene & p-Xylene	110		1.0 U	µg/L
o-Xylene	38		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2 Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	97		117	59-132
Date Analyzed	11/29/98		11/29/98	

EPA METHOD 418.1 - TOTAL PETR. HYDROCARBONS	JX01074	LAB BLANK	Units
Total Petr. Hydrocarbons	1.0 I	1.0 U	mg/L
Date Analyzed	12/07/98	12/07/98	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4293
DATE REPORTED: February 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start up GW -Day 3

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01074	LAB BLANK	Units
Arsenic	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Barium	200.7	**0.11**	0.10 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Lead	200.7	**0.0090** I	0.0050 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		11/30/98	11/30/98	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/02/98	12/02/98	
MISCELLANEOUS	**METHOD**	**JX01074**	**LAB BLANK**	**Units**
pH	150.1	**5.9**	NR	S.U.
Date Analyzed		11/25/98		

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4293
DATE REPORTED: February 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW -Day 3

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	59-132
Date Analyzed	12/01/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4293
DATE REPORTED: February 17, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start up GW -Day 3

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01070,JX01071,JX01073,JX01074)				
Benzene	*/ */ 85	60-138	*	17
Toluene	103/104/ 90	57-138	<1	16
Ethylbenzene	109/101/ 92	49 144	8	17
o-Xylene	100/ 99/ 93	50-151	1	17
EPA Method 602/6230D/8020/8021 (JX01072)				
Benzene	112/115/114	60-138	3	17
Toluene	118/121/118	57-138	2	16
Ethylbenzene	124/128/121	49-144	3	17
o-Xylene	127/131/123	50-151	3	17
EPA Method 418.1				
Total Petr. Hydrocarbons	88/108/103	63-126	#20	16
Total Metals				
Arsenic, 200.7	95/ 95/ 96	64-126	<1	12
Barium, 200.7	92/ 92/ 95	74-119	<1	11
Cadmium, 200.7	96/ 96/ 97	68-121	<1	12
Chromium, 200.7	96/ 96/ 98	73-120	<1	10
Lead, 200.7	94/ 95/ 97	68-126	1	17
Mercury, 245.1	110/111/112	70-136	<1	12
Selenium, 200.7	102/103/102	65-129	<1	10
Silver, 200.7	101/101/102	69-121	<1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99		NA	

Environmental Conservation Laboratories Comprehensive QA Plan #960038

- The associated value failed to meet laboratory established criteria for precision.
* - MS/MSD/RPD unavailable due to high original sample concentration.
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LCS - Laboratory Control Standard
RPD - Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 279
Cooler/Crate No.: N/A
Sampling Event:: Start-up Groundwater Sampling - Day 3

SEIR No.: N/A
COC Number: JX257
Lab: ENCO
Field Logbook No.: JA-PA-002
Logbook Pg. No.:

Sampled by: W.J. Canales (Print) W/ Canales (Sign) ____ (Print) ____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water
DIW	Deionized Water	OFW	Organic Free Water		Storm Event
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01070	ENV	GWT	11/25/98 / 11:20	01:02	HCl	1.1	602	7 day	C
SP-2	JX01071			11:25						
SP-3	JX01072			11:30						
SP-4	JX01073			11:35						
SP-5	JX01074			11:40						
SP-5	JX01074			11:40	03	H_2SO_4	3.1	TRPH		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canales	C. Kohn	11/25/98	11:45	Trans to Lab
C. Kohn	[illegible]	11/25/98	1230	Con'n Lab

COMMENTS/INSTRUCTIONS

JR4293

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick up by ENCO Labs

Ship to: ENCO Labs in Jacksonville, FL

Airbill No. ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

COC Number JX257

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01074	ENV	G-W T	11/25/98/11:40	04	none	5.0	pH	7 day	C
SP-5	JX01074	1	1	1 1	05	HNO_3	6.0	8 RCRA Total metals	1	1

O:\NAVY-RAC\COCR. NUM

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4335
DATE SUBMITTED: December 1, 1998
DATE REPORTED : December 22, 1998

ATTENTION: Mr. Bill Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

Bldg. 880

11/30/98

#1 - JX01084 @ 14:20
#2 - JX01085 @ 14:25
#3 - JX01086 @ 14:30
#4 - JX01087 @ 14:35
#5 - JX01088 @ 14:35
#6 - JX01089 @ 14:35

CT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01084		JX01085		Units
Methyl tert-butyl ether	200	D1	100	D2	µg/L
Benzene	94	D1	1.0 U		µg/L
Toluene	2.2		1.0 U		µg/L
Chlorobenzene	1.0 U		1.0 U		µg/L
Ethylbenzene	1.3		1.0 U		µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U		µg/L
o-Xylene	1.0 U		1.0 U		µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U		µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U		µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U		µg/L
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	101		97		59-132
Date Analyzed	12/03/98		12/04/98		

U = Compound was analyzed for but not detected to the level shown.
= Analyte value determined from a 1:10 dilution.
= Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01086		JX01087		Units
Methyl tert-butyl ether	50		24	D1	µg/L
Benzene	350	D1	86	D1	µg/L
Toluene	100		10 U	D1	µg/L
Chlorobenzene	1.0 U		10 U	D1	µg/L
Ethylbenzene	130	D1	52	D1	µg/L
m-Xylene & p-Xylene	280	D1	32	D1	µg/L
o-Xylene	110		10 U	D1	µg/L
1,3-Dichlorobenzene	1.0 U		10 U	D1	µg/L
1,4-Dichlorobenzene	1.0 U		10 U	D1	µg/L
1,2-Dichlorobenzene	1.0 U		10 U	D1	µg/L
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	95		100		59-132
Date Analyzed	12/03/98		12/04/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01088		JX01089		Units
Methyl tert-butyl ether	**70**		**30**	D2	µg/L
Benzene	**230**	D1	**83**	D2	µg/L
Toluene	**6.0**		5.0 U	D2	µg/L
Chlorobenzene	1.0 U		5.0 U	D2	µg/L
Ethylbenzene	**80**		**51**	D2	µg/L
m-Xylene & p-Xylene	**150**		**33**	D2	µg/L
o-Xylene	**50**		5.0 U	D2	µg/L
1,3-Dichlorobenzene	1.0 U		5.0 U	D2	µg/L
1,4-Dichlorobenzene	1.0 U		5.0 U	D2	µg/L
1,2-Dichlorobenzene	1.0 U		5.0 U	D2	µg/L
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	95		103		59-132
Date Analyzed	12/03/98		12/03/98		

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01088	JX01089	Units
Hydrocarbons (C8-C40)	**0.25**	NR	mg/L
Surrogate:	**% RECOV**		**LIMITS**
o-Terphenyl	67		65-140
Date Extracted	12/07/98		
Date Analyzed	12/10/98		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.
D2 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01088	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/03/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/03/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/03/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/03/98	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		12/03/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/03/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/18/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/03/98	

MISCELLANEOUS	METHOD	JX01088	Units
pH	150.1	6.1	S.U.
Date Analyzed		12/02/98	

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	102	101	59-132
Date Analyzed	12/03/98	12/04/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	1.0 U	µg/L
Isopropyl Ether	1.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L

Surrogate:	% RECOV	LIMITS
Bromofluorobenzene	85	59-132
Date Analyzed	07/06/98	

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	1.0 U	µg/L
Isopropyl Ether	1.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	85	59-132
Date Analyzed	07/06/98	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	83	65-140
Date Analyzed	12/09/98	

J = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/03/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/03/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/03/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/03/98	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		12/03/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/03/98	
Selenium	200.7	**0.020**	mg/L
Date Analyzed		12/03/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/03/98	

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	101	59-132
Date Analyzed	12/04/98	

U = Compound was analyzed for but not detected to the level shown.

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	106/110/109	60-138	4	17
Toluene	113/117/116	57-138	3	16
Ethylbenzene	117/120/119	49-144	2	17
o-Xylene	118/124/123	50-151	5	17

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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ENCO LABORATORIES
REPORT # : JR4335
DATE REPORTED: December 22, 1998
PROJECT NAME : Bldg. 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
Total Metals				
Arsenic, 200.7	107/108/107	64-126	<1	12
Barium, 200.7	103/105/105	74-119	2	11
Cadmium, 200.7	103/105/106	68-121	2	12
Chromium, 200.7	106/108/108	73-120	2	10
Lead, 200.7	104/105/106	68-126	<1	19
Mercury, 245.1	112/111/112	70-136	<1	12
Selenium, 200.7	108/109/110	65-129	<1	10
Silver, 200.7	105/105/106	69-121	<1	12
Miscellaneous				
150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	80/ 79/ 91	51-163	1	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS, Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Startup Groundwater Sampling

SEIR No.: N/A
COC Number: 1X266
Lab: ENCO
Field Logbook No.: JX-DA-002
Logbook Pg. No.:

Sampled by: W.J. Canelos (Print) W.J. Canelos (Sign) (Print) (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01084	ENV	GWT	11/30/98 / 14:20	01 & 02	HCl	1.1	602	7 day	C
SP-2	JX01085	|	|	14:25	|	|	|	|	|	
SP-3	JX01086	|	|	14:30	|	|	|	|	|	
SP-4	JX01087	|	|	14:35	|	|	|	|	|	
SP-5	JX01088	|	|	14:35	|	|	|	|	|	
SP-5	JX01088	|	|	|	03	H_2SO_4	3.1	FL PRO	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canelos	C. Kohn	12/1/98	8:00	TRANS TO LAB
C. Kohn		12/1/98	8:30	Log in lab

COMMENTS/INSTRUCTIONS

JR 4335

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Labs

Ship to: ENCO Labs in Jax, FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

COC Number JX260

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01088	ENV	GWT	11/30/93 / 14:35	04	None	5.0	pH	7 day	C
SP-5	JX01088	|	|	|	05	HNO_3	6.0	& RCRA Tot. Metals	|	|
Duplicate	JX01089	|	|	|	01 & 02	HCl	1.1	602	|	|

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4337
DATE SUBMITTED: December 2, 1998
DATE REPORTED : December 15, 1998

ATTENTION: Mr. Bill Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

Bldg. 880 - GW

12/01/98

#1 JX01090 @ 16:30
#2 - JX01091 @ 16:35
#3 - JX01093 @ 16:45
#4 - JX01094 @ 16:50

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01090		JX01091	Units
Methyl tert-butyl ether	460	D1	2.2	µg/L
Benzene	320	D1	1.0 U	µg/L
Toluene	14		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	3.8		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	110		104	59 132
Date Analyzed	12/04/98		12/06/98	

U = Compound was analyzed for but not detected to the level shown.
D1 - Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01093	JX01094	Units
Methyl tert butyl ether	14	42	µg/L
Benzene	87	55	µg/L
Toluene	4.0	2.4	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	38	19	µg/L
m-Xylene & p-Xylene	25	16	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	90	131	59-132
Date Analyzed	12/04/98	12/04/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01094	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Barium	200.7	**0.15**	mg/L
Date Analyzed		12/07/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/07/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Lead	200.7	**0.0090** I	mg/L
Date Analyzed		12/07/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/03/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	

MISCELLANEOUS	METHOD	JX01094	Units
pH	150.1	**6.0**	S.U.
Date Analyzed		12/02/98	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01094	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	80	65-140
Date Extracted	12/08/98	
Date Analyzed	12/11/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	99	105	59-132
Date Analyzed	12/04/98	12/05/98	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	81	65-140
Date Extracted	12/08/98	
Date Analyzed	12/11/98	

NR = Analysis not requested for this sample.
U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/07/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/07/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		12/07/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/03/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	

U - Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4337
DATE REPORTED: December 15, 1998
PROJECT NAME : Bldg. 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01090,JX01093,JX01094)				
Benzene	97/ 98/106	60-138	1	17
Toluene	90/ 88/ 94	57-138	2	16
Ethylbenzene	89/ 90/ 97	49-144	1	17
o-Xylene	99/102/111	50-151	3	17
EPA Method 602/6230D/8020/8021 (JX01091)				
Benzene	98/ 93/ 98	60-138	5	17
Toluene	93/ 88/ 89	57-138	6	16
Ethylbenzene	88/ 84/ 90	49-144	5	17
o-Xylene	105/ 98/105	50-151	7	17
Total Metals				
Arsenic, 200.7	97/ 96/ 97	64-126	1	12
Barium, 200.7	92/ 93/ 94	74-119	1	11
Cadmium, 200.7	94/ 95/ 96	68-121	1	12
Chromium, 200.7	95/ 96/ 97	73-120	1	10
Lead, 200.7	93/ 92/ NA	68-126	1	19
Mercury, 245.1	112/111/112	70-136	<1	12
Selenium, 200.7	100/ 98/100	65-129	2	10
Silver, 200.7	103/102/103	69-121	<1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	NA	NA	NA
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	80/ 79/ 93	51-163	1	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 580
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Startup Groundwater Sampling

SEIR No.: N/A
COC Number: JA261
Lab: ENCO
Field Logbook No.: JA-DA-002
Logbook Pg. No.:

Sampled by: W.J. Canelos (Print) W.J. Canelos (Sign) (Print) (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01090	ENV	GWT	12/1/98 / 16:30	01:02	HCl	1.1	602	7 day	C
SP-2	JX01091			16:35						
SP-4	JX01093			16:45						
SP-5	JX01094			16:50						
					03:04	H_2SO_4	3.1	FL Pro		
					05	none	5.0	pH		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canelos	G. Kohn	12/2/98	0745	Trans. To Lab
G. Kohn	[illegible]	12/2/98	0812	Login Lab

COMMENTS/INSTRUCTIONS

Could not collect sample from SP-3 due to pump problem.

JR 4337

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U By ENCO Lab

Ship to: ENCO Labs in Jacksonville, FL

Airbill No.: Traffic Report No.:

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

COC Number JX261

CHAIN OF CUSTODY RECORD (Continued)

Page 2 of 2

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01094	ENV	G-WT	12-1-98/16:50	06	HNO_3	6.0	8 RCRA Total metals	7 day	C

Q:\NAVY-RAC\COCR.NUM

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4408
DATE SUBMITTED: December 3, 1998
DATE REPORTED : December 23, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up GW

12/02/98

#1 - JX01097 @ 17:05
#2 - JX01098 @ 17:10
#3 - JX01099 @ 17:15
#4 - JX01100 @ 17:20
#5 - JX01101 @ 17:25
#6 - JX01102

PROJECT MANAGER _____
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01099		JX01100		Units
Methyl tert-butyl ether	40		9.1		µg/L
Benzene	290	D1	44		µg/L
Toluene	64		1.4	I	µg/L
Chlorobenzene	1.0	U	1.0	U	µg/L
Ethylbenzene	67		20		µg/L
m-Xylene & p-Xylene	180		17		µg/L
o-Xylene	73		1.0	U	µg/L
1,3-Dichlorobenzene	1.0	U	1.0	U	µg/L
1,4-Dichlorobenzene	1.0	U	1.0	U	µg/L
1,2-Dichlorobenzene	1.0	U	1.0	U	µg/L
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	95		*		59-132
Date Analyzed	12/13/98		12/13/98		

* = Surrogate recovery unavailable due to matrix interference.
U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01101	JX01102	Units
Methyl tert-butyl ether	50	58	µg/L
Benzene	110	120	µg/L
Toluene	21	22	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	32	32	µg/L
m-Xylene & p-Xylene	76	78	µg/L
o-Xylene	26	26	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	105	125	59-132
Date Analyzed	12/13/98	12/13/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01101	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/09/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/07/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/09/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
[illegible]d	200.7	0.0050 U	mg/L
Date Analyzed		12/07/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/09/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	

MISCELLANEOUS	METHOD	JX01101	Units
pH	150.1	**6.2**	S.U.
Date Analyzed		12/04/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01101	Units
Hydrocarbons (C8-C40)	0.48	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	84	65-140
Date Extracted	12/08/98	
Date Analyzed	12/11/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	100	59-132
Date Analyzed	12/12/98	12/13/98	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	81	65-140
Date Extracted	12/08/98	
Date Analyzed	12/11/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/09/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/07/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/09/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		12/07/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/09/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4408
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	*/ */ 82	60-138	<1	17
Toluene	70/ 72/ 73	57-138	3	16
Ethylbenzene	70/ 74/ 73	49-144	6	17
o-Xylene	91/ 95/100	50-151	4	17
Total Metals				
Arsenic, 200.7	102/102/104	64-126	<1	12
Barium, 200.7	93/ 90/ 89	74-119	3	11
Cadmium, 200.7	102/101/101	68-121	<1	12
Chromium, 200.7	96/ 93/ 93	73-120	3	10
Lead, 200.7	94/ 92/ 91	68-126	2	19
Mercury, 245.1	123/121/117	70-136	2	12
Selenium, 200.7	100/ 99/ 97	65-129	1	10
Silver, 200.7	100/ 97/100	69-121	3	12
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	80/ 79/ 93	51-163	1	27
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 850
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Startup Groundwater Sampling

SEIR No.: N/A
COC Number: JX264
Lab: ENCO
Field Logbook No.: JA-OA-002
Logbook Pg. No.: 45

Sampled by: W.J. Canales (Print) — W.J. Canales (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01097	ENV	GWT	12/2/98 / 17:05	01:02	HCl	1.1	602	7 day	C
SP-2	JX01098			17:10						
SP-3	JX01099			17:15						
SP-4	JX01100			17:20						
SP-5	JX01101			17:25						
TP-5	JX01101			17:25	03:04	H_2SO_4	3.1	FL PRO		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canales	C. Kohn	12/3/98	0745	TRANS TO Lab
C. Kohn	[illegible]	12/3/98	907	Login Lab

COMMENTS/INSTRUCTIONS

JR 4408

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U By ENCO Lab

Ship to: ENCO Lab in Jacksonville, FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n o s UN2910

COC Number 264

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01101	ENV	GWT	12/2/98 / 17:25	05	none	5.0	pH	7 day	C
SP-5	JX01101	|	|	| 17:25	06	HNO_3	6.0	8 RCRA tot. metals	|	|
Duplicate	JX01102	|	|	| —	01 : 02	HCl	1.1	602	|	|

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4398
DATE SUBMITTED: December 3, 1998
DATE REPORTED : December 22, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up CW

12/03/98

#1 - JX01103 @ 12:50
#2 - JX01104 @ 12:55
#3 - JX01105 @ 13:00
#4 - JX01106 @ 13:05
#5 - JX01107 @ 13:10
#6 - JX01108

PROJECT MANAGER Scott D Mart
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01103		JX01104	Units
Methyl tert-butyl ether	180	D1	2.4	µg/L
Benzene	91		1.0 U	µg/L
Toluene	1.0 U		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	1.0 U		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	120		103	59-132
Date Analyzed	12/11/98		12/11/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01105		JX01106	Units
Methyl tert-butyl ether	52		10	µg/L
Benzene	230	D1	49	µg/L
Toluene	63		2.0	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	64		20	µg/L
m-Xylene & p-Xylene	210		19	µg/L
o-Xylene	7.5		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	*		*	59-132
Date Analyzed	12/11/98		12/11/98	

* = Surrogate recovery unavailable due to matrix interference.
U - Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01107	JX01108	Units
Methyl tert-butyl ether	45	37	µg/L
Benzene	73	73	µg/L
Toluene	11	12	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	16	17	µg/L
m Xylene & p-Xylene	46	49	µg/L
o-Xylene	1.2	17	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	80	130	59-132
Date Analyzed	12/11/98	12/12/98	

U - Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01107	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Barium	200.7	0.13	mg/L
Date Analyzed		12/07/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/07/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Lead	200.7	0.0050 I	mg/L
Date Analyzed		12/07/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/14/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	

MISCELLANEOUS	METHOD	JX01107	Units
pH	150.1	6.0	S.U.
Date Analyzed		12/04/98	

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01107	Units
Hydrocarbons (C8 C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	87	65-140
Date Extracted	12/04/98	
Date Analyzed	12/08/98	

U - Compound was analyzed for but not detected to the level shown.
NR - Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L

Surrogate:	% RECOV	LIMITS
Bromofluorobenzene	95	59-132
Date Analyzed	12/11/98	

U - Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/07/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/07/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		12/07/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/14/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/10/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/07/98	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	119	65-140
Date Extracted	12/04/98	
Date Analyzed	12/08/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4398
DATE REPORTED: December 22, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	91/ 91/ 91	60-138	<1	17
Toluene	85/ 86/ 85	57-138	1	16
Ethylbenzene	83/ 83/ 83	49-144	<1	17
o-Xylene	113/111/113	50-151	2	17
Total Metals				
Arsenic, 200.7	105/ 98/ 94	64-126	7	12
Barium, 200.7	97/ 92/ 93	74-119	5	11
Cadmium, 200.7	102/ 97/ 97	68-121	5	12
Chromium, 200.7	99/ 94/ 96	73-120	5	10
Lead, 200.7	100/ 95/ 96	68-126	5	19
Mercury, 245.1	106/108/110	70-136	2	12
Selenium, 200.7	110/102/ 97	65-129	8	10
Silver, 200.7	99/ 98/104	69-121	1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	69/ 79/ 78	51-163	14	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start-up Groundwater Sampling

SEIR No.: N/A
COC Number: JX265
Lab. ENCO
Field Logbook No: JX-PA-002
Logbook Pg. No.: 48

Sampled by: W.J. Canelos (Print) W.J. Canelos (Sign) ____ (Print) ____ (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01103	ENV	GWT	12/3/98 / 12:50	01 : 02	HCl	1.1	602	7 day	C
SP-2	JX01104	|	|	12:55	|	|	|	|	|	|
SP-3	JX01105	|	|	13:00	|	|	|	|	|	|
SP-4	JX01106	|	|	13:05	|	|	|	|	|	|
SP-5	JX01107	|	|	13:10	|	|	|	|	|	|
SP-5	JX01107	|	|	13:10	03 : 04	H_2SO_4	3.1	FL PRO	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J. Canelos	C. Kohr	12/3/98	13:45	Trans to Lab
C. Kohr	[illegible]	12/3/98	14:10	Login lab

COMMENTS/INSTRUCTIONS

JR4398

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U By ENCO Labs

Ship to: ENCO Labs in Jacksonville, FL

Airbill No. ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

COC Number JX265

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01107	ENV	GWT	12/10/98 13:10	05	none	5.0	pH	7 day	C
SP-5	JX01107	|	|	| 13:10	06	HNO_3	6.0	8 RCRA Tot. metals	|	|
Duplicate	JX01108	|	|	| —	01 & 02	HCl	1.1	602	|	|

Environmental Conservation Laboratories
4810 Executive Park Court. Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4484
DATE SUBMITTED: December 8, 1998
DATE REPORTED : December 23, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Start-up GW

12/07/98

#1 - JX01111 @ 16:30
#2 - JX01112 @ 16:35
#3 - JX01113 @ 16:40
#4 - JX01114 @ 16:45
#5 - JX01115 @ 16:50
#6 - JX01116

PROJECT MANAGER _____
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01113		JX01114	Units
Methyl tert-butyl ether	80		40	µg/L
Benzene	110	D1	110	µg/L
Toluene	63		3.6	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	80		53	µg/L
m-Xylene & p-Xylene	160		52	µg/L
o-Xylene	84		3.5	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	110		102	59-132
Date Analyzed	12/15/98		12/15/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01115	JX01116	Units
Methyl tert-butyl ether	51	58	µg/L
Benzene	49	66	µg/L
Toluene	7.0	7.6	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	14	17	µg/L
m-Xylene & p-Xylene	28	31	µg/L
o-Xylene	8.7	8.4	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	108	107	59-132
Date Analyzed	12/16/98	12/15/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01115	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/14/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/14/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/14/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/14/98	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		12/15/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/14/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/15/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/14/98	

MISCELLANEOUS	METHOD	JX01115	Units
pH	150.1	6.5	S.U.
Date Analyzed		12/08/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01115	Units
Hydrocarbons (C8-C40)	0.23	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	83	65-140
Date Extracted	12/11/98	
Date Analyzed	12/14/98	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	101	105	59-132
Date Analyzed	12/15/98	12/16/98	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	69	65-140
Date Extracted	12/11/98	
Date Analyzed	12/14/98	

U = Compound was analyzed for but not detected to the level shown.
R = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/14/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/14/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/14/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/14/98	
[illegible]	200.7	0.0050 U	mg/L
Date Analyzed		12/15/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		12/14/98	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/15/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/14/98	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4484
DATE REPORTED: December 23, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01111,JX01112,JX01113,JX01114,JX01116)				
Benzene	120/108/111	60-138	10	17
Toluene	126/115/117	57-138	9	16
Ethylbenzene	126/116/117	49-144	8	17
o-Xylene	132/119/120	50-151	10	17
EPA Method 602/6230D/8020/8021 (JX01115)				
Benzene	103/105/ 72	60-138	2	17
Toluene	109/112/ 77	57-138	3	16
Ethylbenzene	113/116/ 80	49-144	3	17
o-Xylene	116/118/ 81	50-151	2	17
Metal Metals				
Arsenic, 200.7	103/102/103	64-126	<1	12
Barium, 200.7	95/ 96/ 97	74-119	1	11
Cadmium, 200.7	97/ 97/ 99	68-121	<1	12
Chromium, 200.7	96/ 96/ 98	73-120	<1	10
Lead, 200.7	96/ 96/ 99	68-126	<1	19
Mercury, 245.1	106/108/110	70-136	2	12
Selenium, 200.7	104/104/108	65-129	<1	10
Silver, 200.7	99/ 94/100	69-121	5	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	97/ 80/ 74	51-163	19	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start-up Groundwater Sampling

SEIR No.: N/A
COC Number: JX268
Lab: ENCO
Field Logbook No.: JX-MA-~~18~~ 3 4K
Logbook Pg. No.: ~~E3~~ 47 4K

Sampled by: W.J. Canales (Print) W/ Canales (Sign) ____ (Print) ____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01111	ENV	GWT	12/7/98 / 16:30	01:02	HCl	1.1	602	7 day	C
SP-2	JX01112	|	|	| 16:35	|	|	|	|	|	|
SP-3	JX01113	|	|	| 16:40	|	|	|	|	|	|
SP-4	JX01114	|	|	| 16:45	|	|	|	|	|	|
SP-5	JX01115	|	|	| 16:50	|	|	|	|	|	|
SP-5	JX01115	|	|	| 16:50	03:04	H_2SO_4	3.1	FL PRO	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canales	C. Kohn	12/8/98	0730	TRANS TO Lab
C. Kohn	[illegible]	12/8/98	0800	Login Lab

COMMENTS/INSTRUCTIONS

JR4484

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Labs

Ship to: ENCO Labs in Jacksonville, FL

Airbill No ____ Traffic Report No ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n o.s., UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173 421 for excepted radioactive material, limited quantity, n o s UN2910

COC Number 269

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX0115	ENV	GWT	12/7/98 / 16.50	05	none	5.0	pH	7 day	C
SP-5	JX0115	|	|	| 16.50	06	HNO_3	6.1	8 RCRA Total Metals	|	|
Replicate	JX0116	|	|	| —	01 : 02	HCl	1.1	CO2	|	|

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No E92277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4544
DATE SUBMITTED: December 10, 1998
DATE REPORTED : December 24, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880,

Start-up GW

12/09/98

#1 - JX01129 @ 12:40
#2 - JX01130 @ 12:45
#3 - JX01131 @ 12:50
#4 - JX01132 @ 12:55
#5 - JX01133 @ 13:00

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01129		JX01130	Units
Methyl tert-butyl ether	**220**	D1	**4.0**	µg/L
Benzene	**110**		1.0 U	µg/L
Toluene	1.0 U		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	**1.7**		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	100		106	59-132
Date Analyzed	12/18/98		12/19/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01131		JX01132	Units
Methyl tert-butyl ether	61		2.0 U	µg/L
Benzene	280	D1	3.9	µg/L
Toluene	83		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	100		1.0 U	µg/L
m-Xylene & p-Xylene	240	D1	2.4	µg/L
o-Xylene	110		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	128		106	59-132
Date Analyzed	12/18/98		12/19/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01133	LAB BLANK	Units
Methyl tert-butyl ether	66	2.0 U	µg/L
Benzene	81	1.0 U	µg/L
Toluene	18	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	19	1.0 U	µg/L
m-Xylene & p-Xylene	55	1.0 U	µg/L
o-Xylene	20	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	104	104	59-132
Date Analyzed	12/18/98	12/18/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01133	LAB BLANK	Units
Arsenic	200.7	**0.010** I	0.010 U	mg/L
Date Analyzed		12/14/98	12/14/98	
Barium	200.7	0.10 U	0.10 U	mg/L
Date Analyzed		12/14/98	12/14/98	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		12/14/98	12/14/98	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/14/98	12/14/98	
Lead	200.7	0.0050 U	0.0050 U	mg/L
Date Analyzed		12/15/98	12/15/98	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		12/14/98	12/14/98	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/14/98	12/14/98	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/14/98	12/14/98	

MISCELLANEOUS	METHOD	JX01133	LAB BLANK	Units
pH	150.1	**6.4**	NR	S.U.
Date Analyzed		12/10/98		

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01133	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	0.20 U	mg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
o-Terphenyl	76	69	65-140
Date Extracted	12/11/98	12/11/98	
Date Analyzed	12/14/98	12/14/98	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	102	102	59-132
Date Analyzed	12/19/98	12/19/98	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4544
DATE REPORTED: December 24, 1998
REFERENCE : BLDG 880
PROJECT NAME : Start-up GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01129,JX01131,JX01132,JX01133)				
Benzene	105/106/109	60-138	<1	17
Toluene	113/114/115	57-138	<1	16
Ethylbenzene	116/118/119	49-144	2	17
o-Xylene	118/120/122	50-151	2	17
EPA Method 602/6230D/8020/8021 (JX01130)				
Benzene	106/107/103	60-138	<1	17
Toluene	112/114/108	57-138	2	16
Ethylbenzene	117/119/113	49-144	2	17
o-Xylene	119/122/115	50-151	2	17
Total Metals				
Arsenic, 200.7	103/105/102	64-126	2	12
Barium, 200.7	95/ 97/ 97	74-119	2	11
Cadmium, 200.7	98/ 99/ 99	68-121	1	12
Chromium, 200.7	95/ 96/ 97	73-120	1	10
Lead, 200.7	93/ 96/ 99	68-126	3	19
Mercury, 245.1	106/108/110	70-136	2	12
Selenium, 200.7	118/121/101	65-129	2	10
Silver, 200.7	81/ 82/ 90	69-121	1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	NA	NA	NA
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	97/ 80/ 74	51-163	19	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 856
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Start up Groundwater Sampling

SEIR No: N/A
COC Number: JX272
Lab: ENCO
Field Logbook No.: JX-GA-2
Logbook Pg. No.: 50

Sampled by: W. J. Canales (Print) — W J Canales (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01129	ENV	GWT	12/9/98 / 12:40	01:02	HCl	1.1	602	7-day	C
SP-2	JX01130	|	|	| 12:45	|	|	|	|	|	|
SP-3	JX01131	|	|	| 12:50	|	|	|	|	|	|
SP-4	JX01132	|	|	| 12:55	|	|	|	|	|	|
SP-5	JX01133	|	|	| 13:00	|	|	|	|	|	|
SP-5	JX01133	|	|	| 13:00	03:04	H_2SO_4	3.1	FL PRO	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W J Canales	C. Kohn	12/10/98	0735	Trans to lab
C. Kohn	[illegible]	12/10/98	0820	Login lab

COMMENTS/INSTRUCTIONS

JR 4544

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Labs

Ship to: ENCO Labs in Jacksonville FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

COC Number JX272

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01133	ENV	GWT	12/7/98/1300	05	none	5.0	pH	7 day	C
SP-5	1	1	1	1 1	06	HNO_3	6 1	8 RCRA Total Metals	1	1

15604-1

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4648
DATE SUBMITTED: December 17, 1998
DATE REPORTED : December 31, 1998

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Weekly Start-up GW

12/16/98

#1 - JX01146 @ 11:20
#2 - JX01147 @ 11:25
#3 - JX01148 @ 11:30
#4 - JX01149 @ 11:35
#5 - JX01150 @ 11:40

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4648
DATE REPORTED: December 31, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01146		JX01147	Units
Methyl tert-butyl ether	230	D1	64	µg/L
Benzene	79		1.0 U	µg/L
Toluene	1.0 U		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	1.0 U		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	% RECOV		% RECOV	LIMITS
Bromofluorobenzene	105		90	59-132
Date Analyzed	12/23/98		12/23/98	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4648
DATE REPORTED: December 31, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01148	JX01149	Units
Methyl tert-butyl ether	46	4.1	µg/L
Benzene	180	23	µg/L
Toluene	17	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	23	4.9	µg/L
m-Xylene & p-Xylene	85	9.2	µg/L
o-Xylene	29	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	125	99	59-132
Date Analyzed	12/23/98	12/23/98	

U Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4648
DATE REPORTED: December 31, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Start-up GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01150	LAB BLANK	Units
Methyl tert-butyl ether	**61**	2.0 U	µg/L
Benzene	**100**	1.0 U	µg/L
Toluene	**6.2**	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	**11**	1.0 U	µg/L
m-Xylene & p-Xylene	**28**	1.0 U	µg/L
o-Xylene	**7.7**	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	102	95	59-132
Date Analyzed	12/23/98	12/23/98	

U Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4648
DATE REPORTED: December 31, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Start-up GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01150	LAB BLANK	Units
Arsenic	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/21/98	12/21/98	
Barium	200.7	**0.13**	0.10 U	mg/L
Date Analyzed		12/21/98	12/21/98	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		12/21/98	12/21/98	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/21/98	12/21/98	
Lead	200.7	**0.015**	0.0050 U	mg/L
Date Analyzed		12/21/98	12/21/98	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		12/17/98	12/17/98	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/21/98	12/21/98	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		12/21/98	12/21/98	

MISCELLANEOUS	METHOD	JX01150	LAB BLANK	Units
pH	150.1	**5.8**	NR	S.U.
Date Analyzed		12/17/98		

U Compound was analyzed for but not detected to the level shown.
Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4648
DATE REPORTED: December 31, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Start-up GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01150	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.23	0.20 U	mg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
o-Terphenyl	80	87	65-140
Date Extracted	12/23/98	12/23/98	
Date Analyzed	12/29/98	12/29/98	

U Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4648
DATE REPORTED: December 31, 1998
REFERENCE : BLDG 880
PROJECT NAME : Weekly Start-up GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	79/ 75/ 75	60-138	5	17
Toluene	72/ 65/ 67	57-138	10	16
Ethylbenzene	75/ 70/ 68	49-144	7	17
o-Xylene	111/100/101	50-151	10	17
Total Metals				
Arsenic, 200.7	105/105/104	64-126	<1	12
Barium, 200.7	103/102/102	74-119	<1	11
Cadmium, 200.7	104/103/103	68-121	<1	12
Chromium, 200.7	105/104/104	73-120	<1	10
Lead, 200.7	103/105/104	68-126	2	19
Mercury, 245.1	76/ 78/ 93	70-136	2	12
Selenium, 200.7	106/107/106	65-129	<1	10
Silver, 200.7	105/104/105	69-121	<1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	95/115/ 71	51-163	19	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Weekly Startup GW Sampling

SEIR No.: N/A
COC Number: JX 280
Lab: ENCO
Field Logbook No.: JX-DA-0011
Logbook Pg. No.: 1 & 13

Sampled by: WJ Canelos (Print) — WJ Canelos (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01146	ENV	GWT	12/16/98 / 11:20	01 & 02	HCl	1.1	602	7 d	C
SP-2	JX01147	|	|	| 11:25	|	|	|	|	|	|
SP-3	JX01148	|	|	| 11:30	|	|	|	|	|	|
SP-4	JX01149	|	|	| 11:35	|	|	|	|	|	|
SP-5	JX01150	|	|	| 11:40	|	|	|	|	|	|
SP-5	JX01150			11:40	03 & 04	H_2SO_4	3.1	FL PRO		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
WJ Canelos	C. Ickes	12/17/98	0730	TRANS TO LAB
C. Ickes	[illegible]	12/17/98	0800	Log'in in LAB

COMMENTS/INSTRUCTIONS

JR4648

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO Lab

Ship to: ENCO Labs in Jax, FL

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

COC Number JX2805

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01150	ENV	GWT	12/1/99 / 11:40	05	none	5.0	pH	7 d	C
SP-5	JX01150	|	|	| |	06	HNO_3	6.1	8 RCRA Total Metals	|	|

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E8227

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4743
DATE SUBMITTED: December 24, 1998
DATE REPORTED : January 5, 1999

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Weekly GW

12/23/98

#1 - JX01172 @ 14:00
#2 - JX01174 @ 14:10
#3 - JX01175 @ 14:15
#4 - JX01176 @ 14:20

PROJECT MANAGER _____
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01172	JX01174	Units
Methyl tert-butyl ether	130	48	µg/L
Benzene	63	120	µg/L
Toluene	4.5	51	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	2.9	65	µg/L
m-Xylene & p-Xylene	1.0 U	120	µg/L
o-Xylene	1.0 U	58	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	*	123	59-132
Date Analyzed	12/26/98	12/26/98	

* Surrogate recovery unavailable due to matrix interference.
Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01175	JX01176	Units
Methyl tert-butyl ether	10	28	µg/L
Benzene	42	80	µg/L
Toluene	3.3	25	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	27	37	µg/L
m-Xylene & p-Xylene	22	64	µg/L
o-Xylene	1.3	30	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	*	130	59-132
Date Analyzed	12/26/98	12/26/98	

* Surrogate recovery unavailable due to matrix interference.
U Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01176	Units
Arsenic	200.7	**0.022** I	mg/L
Date Analyzed		12/31/98	
Barium	200.7	0.20 U	mg/L
Date Analyzed		12/31/98	
Cadmium	200.7	0.0020 U	mg/L
Date Analyzed		12/31/98	
Chromium	200.7	0.020 U	mg/L
Date Analyzed		12/31/98	
Lead	200.7	0.010 U	mg/L
Date Analyzed		12/31/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/04/99	
Selenium	200.7	0.020 U	mg/L
Date Analyzed		12/31/98	
Silver	200.7	0.020 U	mg/L
Date Analyzed		12/31/98	

MISCELLANEOUS	METHOD	JX01176	Units
pH	150.1	**6.1**	S.U.
Date Analyzed		12/24/98	

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01176	Units
Hydrocarbons (C8-C40)	0.50	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	74	65-140
Date Extracted	12/30/98	
Date Analyzed	12/31/98	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	111	59-132
Date Analyzed	12/26/98	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	95	65-140
Date Extracted	12/30/98	
Date Analyzed	12/31/98	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		12/31/98	
Barium	200.7	0.10 U	mg/L
Date Analyzed		12/31/98	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		12/31/98	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		12/31/98	
[illegible]d	200.7	0.0050 U	mg/L
[illegible]e Analyzed		12/31/98	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/04/99	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		12/31/98	
Silver	200.7	0.010 U	mg/L
Date Analyzed		12/31/98	

[illegible]ompound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4743
DATE REPORTED: January 5, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	105/106/ 90	60-138	<1	17
Toluene	113/111/ 98	57-138	2	16
Ethylbenzene	117/120/ 97	49-144	2	17
o-Xylene	129/136/105	50-151	5	17
Total Metals				
Arsenic, 200.7	100/101/102	64-126	<1	12
Barium, 200.7	93/ 94/ 99	74-119	1	11
Cadmium, 200.7	94/ 96/100	68-121	2	12
Chromium, 200.7	94/ 94/100	73-120	<1	10
Lead, 200.7	94/105/100	68-126	11	19
Mercury, 245.1	115/114/109	70-136	<1	12
Selenium, 200.7	102/103/102	65-129	<1	10
Silver, 200.7	95/ 95/ 98	68-122	<1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	95/115/ 76	51-163	19	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Weekly GW Sampling

SEIR No.: NA
COC Number: JX 287
Lab: ENCO
Field Logbook No.: JX-OA-0011
Logbook Pg. No.: 4A & B

Sampled by: Lorrain Lockwood (Print) Lorrain Lockwood (Sign) _____ (Print) _____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01172	ENV	GWT	12/23/98 2:00	01:02	HCl	1.1	60L	7 day	C
~~SP-2~~	~~JX01173~~			~~12/23/98 2:05~~						
SP-3	JX01174			12/23/98 2:10						
SP-4	JX01175			12/23/98 2:15						
SP-5	JX01176			12/23/98 2:20						
SP-5	JX01176			12/23/98 2:25	03:04	H2SO4	3.1	Filter		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Lorrain Lockwood	C. Kohw	12/24/98	0815	TRANS TO LAB
C. Kohw	[illegible]	12/24/98	0900	Log in lab

COMMENTS/INSTRUCTIONS

JR4743

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO LAB

Ship to: Enco labs in Jax Fl

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

COC Number 287

CHAIN OF CUSTODY RECORD (Continued)

Page 2 of 2

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX-01176	FUV	C.T	[illegible]	C5	none	5.C	PA	7 Day	C
P-5	JX-01176	1	1	[illegible]	C.6	HNO3	6.1	RCRA 7 Metals	1	1

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4775
DATE SUBMITTED: December 29, 1998
DATE REPORTED : January 8, 1999

ATTENTION: Mr. Bill Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

Building 880

12/29/98

#1 - JX01181 @ 11:00
#2 - JX01182 @ 11:05
#3 - JX01183 @ 11:10
#4 - JX01184 @ 11:15

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4775
DATE REPORTED: January 8, 1999
PROJECT NAME : Building 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01181		JX01182		Units
Methyl tert-butyl ether	160	D1	67		µg/L
Benzene	52		160	D1	µg/L
Toluene	1.0 U		46		µg/L
Chlorobenzene	1.0 U		1.0 U		µg/L
Ethylbenzene	1.0 U		54		µg/L
m-Xylene & p-Xylene	1.0 U		140		µg/L
o-Xylene	1.0 U		57		µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U		µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U		µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U		µg/L
Surrogate:	**% RECOV**		**% RECOV**		**LIMITS**
Bromofluorobenzene	106		103		59-132
Date Analyzed	12/30/98		12/30/98		

U Compound was analyzed for but not detected to the level shown.
Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR4775
DATE REPORTED: January 8, 1999
PROJECT NAME : Building 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01183	JX01184	Units
Methyl tert-butyl ether	15	84	µg/L
Benzene	34	49	µg/L
Toluene	1.7	9.0	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	21	22	µg/L
m-Xylene & p-Xylene	18	27	µg/L
o-Xylene	1.0 U	12	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	101	85	59-132
Date Analyzed	12/30/98	12/31/98	

U Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4775
DATE REPORTED: January 8, 1999
PROJECT NAME : Building 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01184	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		01/05/99	
Barium	200.7	0.10 U	mg/L
Date Analyzed		01/04/99	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		01/05/99	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		01/04/99	
Lead	200.7	**0.0080** I	mg/L
Date Analyzed		01/05/99	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/04/99	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		01/04/99	
Silver	200.7	0.010 U	mg/L
Date Analyzed		01/04/99	

MISCELLANEOUS	METHOD	JX01184	Units
pH	150.1	**6.1**	S.U.
Date Analyzed		12/30/98	

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4775
DATE REPORTED: January 8, 1999
PROJECT NAME : Building 880

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01184	Units
Hydrocarbons (C8-C40)	0.40	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	99	65-140
Date Extracted	01/05/99	
Date Analyzed	01/07/99	

ENCO LABORATORIES
REPORT # : JR4775
DATE REPORTED: January 8, 1999
PROJECT NAME : Building 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	96	85	59-132
Date Analyzed	12/30/98	12/31/98	

U Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4775
DATE REPORTED: January 8, 1999
PROJECT NAME : Building 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		01/05/99	
Barium	200.7	0.10 U	mg/L
Date Analyzed		01/04/99	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		01/04/99	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		01/04/99	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		01/04/99	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/04/99	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		01/04/99	
Silver	200.7	0.010 U	mg/L
Date Analyzed		01/04/99	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	91	65-140
Date Extracted	01/05/99	
Date Analyzed	01/07/99	

U Compound was analyzed for but not detected to the level shown.

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01181,JX01182,JX01183)				
Benzene	108/104/ 95	60-138	4	17
Toluene	115/112/113	57-138	3	16
Ethylbenzene	119/115/116	49-144	3	17
o-Xylene	121/117/117	50-151	3	17
EPA Method 602/6230D/8020/8021 (JX01184)				
Benzene	70/ 70/110	60-138	<1	17
Toluene	110/110/110	57-138	<1	16
Ethylbenzene	95/ 90/105	49-144	5	17
o-Xylene	115/115/115	50-151	<1	17
Total Metals				
Arsenic, 200.7	103/103/102	64-126	<1	12
Barium, 200.7	100/101/100	74-119	<1	11
Cadmium, 200.7	98/101/ 98	68-121	3	12
Chromium, 200.7	100/102/100	73-120	2	10
Lead, 200.7	99/101/ 98	68-126	2	19
Mercury, 245.1	115/114/109	70-136	<1	12
Selenium, 200.7	108/108/106	65-129	<1	10
Silver, 200.7	98/ 99/100	69-121	1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	95/115/ 56	51-163	19	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Weekly GW Sampling

SEIR No.: N/A
COC Number: JX 291
Lab: ENCO
Field Logbook No.: JX-DA-0011
Logbook Pg. No.: 5A & B

Sampled by: Ronald Lockwood (Print) Ronald Lockwood (Sign) _____ (Print) _____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01181	ENV	GWT	12/29/98 11:00	01:02	HC-1	1.1	602	7 Day	C
SP-3	JX01182			12/29/98 11:05						
SP-4	JX01183			12/29/98 11:10						
SP-5	JX01184			12/29/98 11:15						
SP-5	JX01184			12/29/98 11:15	03:04	H2SO4	3.1	FIPRO		
SP-5	JX01184			12/29/98 11:15	05	none	5.0	Ph		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Ronald Lockwood	C. Kohn	12/29/98	14:05	TRANS TO LAB
C. Kohn	Jacob D Martin	12/29/98	17:00	Login Lab

COMMENTS/INSTRUCTIONS

Jx 4775

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO LAB

Ship to: ENCO labs in Jax Fl

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

COC Number C291

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	J401184	ENV	GWT	12/29/98 11:15	06	HNO3	6.1	RCRA Total Metal	7 Day	C

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4898
DATE SUBMITTED: January 7, 1999
DATE REPORTED : January 18, 1999

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Weekly GW

01/07/99

#1 - JX01188 @ 11:45
#2 - JX01189 @ 13:50
#3 - JX01190 @ 13:55
#4 - JX01191 @ 14:00

PROJECT MANAGER _____
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01188		JX01189	Units
Methyl tert-butyl ether	290	D1	22	µg/L
Benzene	59		9.0	µg/L
Toluene	3.0		5.0	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	2.6		2.4	µg/L
m-Xylene & p-Xylene	1.0 U		2.6	µg/L
o-Xylene	1.0 U		1.3	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	% RECOV		% RECOV	LIMITS
Bromofluorobenzene	122		125	59-132
Date Analyzed	01/11/99		01/11/99	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01190	JX01191	Units
Methyl tert-butyl ether	2.2	8.4	µg/L
Benzene	15	11	µg/L
Toluene	1.0 U	1.1 I	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	4.1	2.4	µg/L
m-Xylene & p-Xylene	4.8	3.9	µg/L
o-Xylene	1.0 U	1.0	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	124	126	59-132
Date Analyzed	01/11/99	01/11/99	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01191	Units
Arsenic	200.7	**0.023** I	mg/L
Date Analyzed		01/11/99	
Barium	200.7	0.10 U	mg/L
Date Analyzed		01/11/99	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		01/11/99	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		01/11/99	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		01/12/99	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/11/99	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		01/11/99	
Silver	200.7	0.010 U	mg/L
Date Analyzed		01/11/99	

MISCELLANEOUS	METHOD	JX01191	Units
pH	150.1	**6.6**	S.U.
Date Analyzed		01/08/99	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01191	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	77	65-140
Date Extracted	01/14/99	
Date Analyzed	01/16/99	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	122	59-132
Date Analyzed	01/11/99	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	76	65-140
Date Extracted	01/14/99	
Date Analyzed	01/16/99	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		01/11/99	
Barium	200.7	0.10 U	mg/L
Date Analyzed		01/11/99	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		01/11/99	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		01/11/99	
Lead	200.7	**0.0070** I	mg/L
Date Analyzed		01/12/99	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/11/99	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		01/12/99	
Silver	200.7	0.010 U	mg/L
Date Analyzed		01/11/99	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4898
DATE REPORTED: January 18, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01188,JX01189,JX01190,JX01191)				
Benzene	92/ 92/ 89	60-138	<1	17
Toluene	97/ 94/ 93	57-138	3	16
Ethylbenzene	106/108/101	49-144	2	17
o-Xylene	115/122/111	50-151	6	17
EPA Method 602/6230D/8020/8021 (JX01189)				
Benzene	97/ 95/ 89	60-138	2	17
Toluene	100/ 99/ 93	57-138	1	16
Ethylbenzene	107/106/101	49-144	<1	17
o-Xylene	115/114/111	50-151	<1	17
Total Metals				
Arsenic, 200.7	104/105/102	64-126	<1	12
[illegible]ium, 200.7	99/102/ 99	74-119	3	11
[illegible]mium, 200.7	103/105/103	68-121	2	12
Chromium, 200.7	104/106/103	73-120	2	10
Lead, 200.7	102/104/102	68-126	2	19
Mercury, 245.1	109/109/106	70-136	<1	12
Selenium, 200.7	109/112/108	65-129	3	10
Silver, 200.7	109/110/107	69-121	<1	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	89/ 78/ 75	51-163	13	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A
Sampling Event:: Weekly GW Sampling

SEIR No.: N/A
COC Number: JX 294
Lab: ENCO
Field Logbook No.: JX-DA-0011
Logbook Pg. No.: 6A & B

Sampled by: Ronald Lockwood (Print) [signature] (Sign) _____ (Print) _____ (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TPB	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil (>6")	PBS	Post Burn Soil
FLO	Flora	SED	Sediment	PTW	Potable Water
FAU	Fauna	SFS	Surface Soil (0-6")	SEP	Seeps
GWT	Groundwater	SPW	Surface Water	SOL	Solid
LCH	Leachate	SLG	Sludge	WWT	Waste Water
OIL	Oil	SLW	Solid Waste	SST	Surface Water
DIW	Deionized Water	OFW	Organic Free Water		Storm Event
DFW	Deionized Organic Free Water				

QC LEVELS

- C Sample results and QC reported
- D Sample results, QC and raw data reported
- E Sample results, blanks, and calibration reported
- S Screening level analysis; sample results and as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01188	ENV	GWT	1/7/99 1:45	01:02	HC-1	1.1	60²	7Day	C
SP-3	JX01189			1/7/99 1:50						
SP-4	JX01190			1/7/99 1:55						
SP-5	JX01191			1/7/99 2:00						
SP-5	JX01191			1/7/99 2:05	03:04	HZSO4	3.1	FIPSO		
SP-5	JX01191			1/7/99 2:10	05	NONE	5.0	ph		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
[signature]	C. Kohn	1/7/99	14:00	Trans To Lab
C. Kohn	[signature]	1/7/99	1700	Login Lab

COMMENTS/INSTRUCTIONS

JR4898

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/U by ENCO LAB

Ship to: Enco. labs in Jax Fl

Airbill No. _____ Traffic Report No. _____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01191	EWV	GWT	1/7/99 2:15	06	HNO3	6.1	RCRA Total Metal	7 Day	C

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR4985
DATE SUBMITTED: January 14, 1999
DATE REPORTED : January 22, 1999

ATTENTION: Mr. W. J. Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: BLDG 880

Weekly GW

01/14/99

#1 - JX01198 @ 11:30
#2 - JX01199 @ 11:35
#3 - JX01200 @ 11:40
#4 - JX01201 @ 11:45

PROJECT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01198	JX01199		Units
Methyl tert-butyl ether	**100**	2.0 U		µg/L
Benzene	**24**	**380**	D1	µg/L
Toluene	1.0 U	**110**	D1	µg/L
Chlorobenzene	1.0 U	1.0 U		µg/L
Ethylbenzene	1.0 U	**120**	D1	µg/L
m-Xylene & p-Xylene	1.0 U	**360**	D1	µg/L
o-Xylene	1.0 U	**130**	D1	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U		µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U		µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U		µg/L
Surrogate:	**% RECOV**	**% RECOV**		**LIMITS**
Bromofluorobenzene	121	119		59-132
Date Analyzed	01/18/99	01/19/99		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:20 dilution.

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01200	JX01201		Units
Methyl tert-butyl ether	2.0 U	60	D2	µg/L
Benzene	33	270	D2	µg/L
Toluene	1.2 I	71	D2	µg/L
Chlorobenzene	1.0 U	10 U	D2	µg/L
Ethylbenzene	9.0	74	D2	µg/L
m-Xylene & p-Xylene	4.3	250	D2	µg/L
o-Xylene	1.0 U	93	D2	µg/L
1,3-Dichlorobenzene	1.0 U	10 U	D2	µg/L
1,4-Dichlorobenzene	1.0 U	10 U	D2	µg/L
1,2-Dichlorobenzene	1.0 U	10 U	D2	µg/L
Surrogate:	**% RECOV**	**% RECOV**		**LIMITS**
Bromofluorobenzene	109	108		59-132
Date Analyzed	01/20/99	01/19/99		

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).
D2 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01201	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	
Barium	200.7	0.10 U	mg/L
Date Analyzed		01/21/99	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		01/21/99	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		01/21/99	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/18/99	
Selenium	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	
Silver	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	

MISCELLANEOUS	METHOD	JX01201	Units
pH	150.1	6.3	S.U.
Date Analyzed		01/15/99	

-- = Compound was analyzed for but not detected to the level shown.
.. = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01201	Units
Hydrocarbons (C8-C40)	0.50	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	85	65-140
Date Extracted	01/21/99	
Date Analyzed	01/22/99	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	107	108	59-132
Date Analyzed	01/18/99	01/20/99	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	LAB BLANK	Units
Arsenic	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	
Barium	200.7	0.10 U	mg/L
Date Analyzed		01/21/99	
Cadmium	200.7	0.0010 U	mg/L
Date Analyzed		01/21/99	
Chromium	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	
Lead	200.7	0.0050 U	mg/L
Date Analyzed		01/21/99	
Mercury	245.1	0.00020 U	mg/L
Date Analyzed		01/18/99	
Selenium	200.7	**0.010** I	mg/L
Date Analyzed		01/21/99	
Silver	200.7	0.010 U	mg/L
Date Analyzed		01/21/99	

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate:	**% RECOV**	**LIMITS**
o-Terphenyl	70	65-140
Date Extracted	01/21/99	
Date Analyzed	01/22/99	

U = Compound was analyzed for but not detected to the level shown.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR4985
DATE REPORTED: January 22, 1999
REFERENCE : BLDG 880
PROJECT NAME : Weekly GW

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01198,JX01199,JX01201)				
Benzene	92/ 91/ 78	60-138	1	17
Toluene	102/101/ 87	57-138	<1	16
Ethylbenzene	107/104/ 92	49-144	3	17
o-Xylene	107/106/ 93	50-151	<1	17
EPA Method 602/6230D/8020/8021 (JX01200)				
Benzene	103/118/ 95	60-138	14	17
Toluene	112/127/102	57-138	12	16
Ethylbenzene	116/132/106	49-144	13	17
o-Xylene	119/133/108	50-151	11	17
Total Metals				
Arsenic, 200.7	98/103/ 99	64-126	5	12
[illegible]ium, 200.7	96/ 99/ 96	74-119	3	11
Cadmium, 200.7	99/103/ 99	68-121	4	12
Chromium, 200.7	100/103/100	73-120	3	10
Lead, 200.7	97/101/ 97	68-126	4	19
Mercury, 245.1	101/102/100	70-136	<1	12
Selenium, 200.7	101/106/102	65-129	5	10
Silver, 200.7	94/ 97/ 94	69-121	3	12
Miscellaneous				
pH, 150.1	NA/ NA/100	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	89/ 78/ 79	51-163	13	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
NA = Not Applicable
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BECHTEL

Site Name: NAS Jacksonville Bldg 880
Delivery Order No.: 27
Cooler/Crate No.: N/A

weekly GW sampling

SEIR No.: N/A
COC Number: JX 300
Lab: ENCO
Field Logbook No.: JX-OA-0011
Logbook Pg. No.: 7A&B

Sampled by: RONALD LOCKWOOD (Print) Ronald Lockwood (Sign) _____ (Print) _____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample resuts, blanks, and calibration reportred
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01198	ENV	GWT	1/14/99 11:30	01 : 02	HC-1	1.1	602	7 day	C
SP. 3	JX01199			1/14/99 11:35						
SP. 4	JX01200			1/14/99 11:40						
SP. 5	JX01201			1/14/99 11:45						
SP. 5	JX01201			1/14/99 11:46	03 : 04	HCS04	3.1	EIPro		
SP. 5	JX01201			1/14/99 11:47	05	none	5.0	pH		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Ronald Lockwood	C. Kohn	1/14/99	1630	TRANS TO Lab
C. Kohn	[illegible]	1/14/99	1700	Login lab

COMMENTS/INSTRUCTIONS

JR4785

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: P/u by Enco LABS

Ship to: Enco LAB in Jax, Fl

Airbill No. _____ Traffic Report No. _____

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	J10120 1	ENV	GWT	1/14/99 11:48	06	HNO3	6.1	RCRA Total metals	70 qy	C

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E8227

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR5161
DATE SUBMITTED: January 28, 1999
DATE REPORTED : February 9, 1999

ATTENTION: Mr. Ron Boardman

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: WO # JX041

Bldg. 880 Weekly

01/28/99

#1 - JX01203 @ 13:30
#2 - JX01204 @ 13:35
#3 - JX01205 @ 13:37
#4 - JX01206 @ 13:40
#5 - JX01207 @ 13:42

ECT MANAGER Scott D. Martin

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01203	JX01204	Units
Methyl tert-butyl ether	26	58	µg/L
Benzene	4.0	1.2	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	% RECOV	% RECOV	LIMITS
Bromofluorobenzene	111	128	59-132
Date Analyzed	02/01/99	02/02/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01205		JX01206	Units
Methyl tert-butyl ether	71		2.0 U	µg/L
Benzene	230	D1	57	µg/L
Toluene	71		3.0	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	79		57	µg/L
m-Xylene & p-Xylene	210		35	µg/L
o-Xylene	96		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	129		107	59-132
Date Analyzed	02/01/99		02/01/99	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01207	LAB BLANK	Units
Methyl tert-butyl ether	51	2.0 U	µg/L
Benzene	73	1.0 U	µg/L
Toluene	13	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	46	1.0 U	µg/L
m-Xylene & p-Xylene	57	1.0 U	µg/L
o-Xylene	15	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	117	113	59-132
Date Analyzed	02/01/99	01/31/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01207	LAB BLANK	Units
Arsenic	200.7	**0.025** I	0.010 U	mg/L
Date Analyzed		02/04/99	02/01/99	
Barium	200.7	**0.10**	0.10 U	mg/L
Date Analyzed		02/01/99	02/01/99	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		02/04/99	02/01/99	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		02/01/99	02/01/99	
[illegible]d	200.7	0.0050 U	0.0050 U	mg/L
Date Analyzed		02/04/99	02/01/99	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		02/08/99	02/08/99	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		02/04/99	02/01/99	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		02/01/99	02/01/99	

MISCELLANEOUS	METHOD	JX01207	LAB BLANK	Units
pH	150.1	**6.1**	NR	S.U.
Date Analyzed		01/29/99		

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.
I = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL).

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01207	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.32	0.20 U	mg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
o-Terphenyl	74	93	65-140
Date Extracted	02/04/99	02/04/99	
Date Analyzed	02/05/99	02/05/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L

Surrogate:	% RECOV	LIMITS
Bromofluorobenzene	124	59-132
Date Analyzed	02/02/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5161
DATE REPORTED: February 9, 1999
REFERENCE : WO # JX041
PROJECT NAME : Bldg. 880 Weekly

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01204)				
Benzene	78/ 84/ 79	60-138	7	17
Toluene	70/ 72/ 71	57-138	3	16
Ethylbenzene	75/ 79/ 72	49-144	5	17
o-Xylene	74/ 78/ 75	50-151	5	17
EPA Method 602/6230D/8020/8021 (JX01203,JX01205,JX01206,JX01207)				
Benzene	92/ 86/ 78	60-138	7	17
Toluene	94/ 89/ 78	57-138	5	16
Ethylbenzene	106/101/ 87	49-144	5	17
o-Xylene	108/102/ 90	50-151	6	17
Total Metals				
Arsenic, 200.7	112/111/107	64-126	<1	12
[illegible]um, 200.7	110/104/107	74-119	6	11
Cadmium, 200.7	110/108/108	68-121	2	12
Chromium, 200.7	108/106/108	73-120	2	10
Lead, 200.7	111/109/110	68-126	<1	19
Mercury, 245.1	103/103/100	70-136	<1	12
Selenium, 200.7	111/111/109	65-129	<1	10
Silver, 200.7	96/ 94/ 97	69-121	2	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	103/ 72/ 92	51-163	#35	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

= The associated value failed to meet laboratory established criteria for precision.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

BECHTEL

Site Name: NIS Jacksonville Bldg 880
Delivery Order No.: 21
Cooler/Crate No.: NA

SEIR No.: NA
COC Number: TX 302
Lab: EMCO
Field Logbook No.: JY-LA-0011
Logbook Pg. No.: 5 thru 5

Sampled by: R Pondman (Print) | R. Pondman (Sign) | (Print) | (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample resuts, blanks, and calibration reportred
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01203	ENV	GW1	1-28-99 12:30	01 02	HC-1	1.1	602	7 DAY	C
SP-2	JX01204			1-28-99 12:33						
SP-3	JX01205			1-28-99 12:37						
SP-4	JX01206			1-28-99 12:40						
SP-5	JX01207			1-28-99 12:42			1.1			
SP-5	JX01207			1-28-99 12:45	03-04	H2SO4	3.1	FLPRO		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
[illegible]	C Kohn	1/28/99	16:15	TRANS TO LAB
C. Kohn	[illegible]	1/28/99	1700	Login Lab

COMMENTS/INSTRUCTIONS

JR5161

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: PC by Energy Labs

Ship to: Energy Lab Sta 711

Airbill No.

Traffic Report No.

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SB 5	JXO 1207	ENV	GW1	1-18-99 13:47	05	NA	5.0	PH	7 Day	C
SB 5	JXO 1207	ENV	GW1	1-18-99 13:45	06	HN03	6.1	RCRA Total Metals		1

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.enicolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR5610
DATE SUBMITTED: February 25, 1999
DATE REPORTED : March 15, 1999

ATTENTION: Mr. Ron Boardman

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

Bldg. 880 Monthly

02/25/99

#1 - JXO1235 @ 13:00
#2 - JXO1236 @ 13:05
#3 - JXO1237 @ 13:10
#4 - JXO1238 @ 13:20
#5 - JXO1239 @ 13:30

PROJECT MANAGER _____
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01235		JX01236	Units
Methyl tert-butyl ether	340	D1	93	µg/L
Benzene	46		6.0	µg/L
Toluene	9.1		5.0	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	6.9		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	% RECOV		% RECOV	LIMITS
Bromofluorobenzene	117		110	59-132
Date Analyzed	03/01/99		03/02/99	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01237	JX01238		Units
Methyl tert-butyl ether	88	56	D1	µg/L
Benzene	100	88	D1	µg/L
Toluene	48	54	D1	µg/L
Chlorobenzene	1.0 U	10 U	D1	µg/L
Ethylbenzene	71	74	D1	µg/L
m-Xylene & p-Xylene	110	110	D1	µg/L
o-Xylene	55	49	D1	µg/L
1,3-Dichlorobenzene	1.0 U	10 U	D1	µg/L
1,4-Dichlorobenzene	1.0 U	10 U	D1	µg/L
1,2-Dichlorobenzene	1.0 U	10 U	D1	µg/L
Surrogate:	**% RECOV**	**% RECOV**		**LIMITS**
Bromofluorobenzene	95	121		59-132
Date Analyzed	03/02/99	03/02/99		

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01239	LAB BLANK	Units
Methyl tert-butyl ether	36	2.0 U	µg/L
Benzene	65	1.0 U	µg/L
Toluene	21	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	38	1.0 U	µg/L
m-Xylene & p-Xylene	61	1.0 U	µg/L
o-Xylene	24	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	100	105	59-132
Date Analyzed	03/02/99	03/01/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01239	LAB BLANK	Units
Arsenic	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		03/09/99	03/09/99	
Barium	200.7	**0.11**	0.10 U	mg/L
Date Analyzed		03/09/99	03/09/99	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		03/09/99	03/09/99	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		03/09/99	03/09/99	
Lead	200.7	0.0050 U	0.0050 U	mg/L
Date Analyzed		03/09/99	03/09/99	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		02/26/99	02/26/99	
Selenium	200.7	0.020 U	0.010 U	mg/L
Date Analyzed		03/10/99	03/09/99	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		03/09/99	03/09/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01239	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.30	0.20 U	mg/L
Surrogate:	% RECOV	% RECOV	LIMITS
o-Terphenyl	77	73	65-140
Date Extracted	03/02/99	03/02/99	
Date Analyzed	03/04/99	03/03/99	

MISCELLANEOUS	METHOD	JX01239	LAB BLANK	Units
pH	150.1	6.3	NR	S.U.
Date Analyzed		02/26/99		

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate:	% RECOV	LIMITS
Bromofluorobenzene	106	59-132
Date Analyzed	03/02/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR5610
DATE REPORTED: March 15, 1999
PROJECT NAME : Bldg. 880 Monthly

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	*/ */ 97	60-138	*	17
Toluene	80/ 80/106	57-138	<1	16
Ethylbenzene	85/ 85/114	49-144	<1	17
o-Xylene	90/ 85/113	50-151	6	17
Total Metals				
Arsenic, 200.7	117/119/113	64-126	2	12
Barium, 200.7	112/114/110	74-119	2	11
Cadmium, 200.7	111/113/109	68-121	2	12
Chromium, 200.7	113/115/111	73-120	2	10
Lead, 200.7	113/114/110	68-126	<1	19
Mercury, 245.1	101/101/104	70-136	<1	12
Selenium, 200.7	106/108/112	65-129	2	10
Silver, 200.7	108/113/110	69-121	4	12
Miscellaneous				
pH, 150.1	NA/ NA/100	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	96/ 94/ 95	51-163	2	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

* = MS/MSD/RPD unavailable due to high original sample concentration.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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CHAIN OF CUSTODY RECORD

BEI HTEL

Site Name: NAS Jacksonville Bldg 880
Delivery Order No.: 27
Cooler/Crate No.: NA

SEIR No.: NA
COC Number: Jx 369
Lab: Enco
Field Logbook No.: Jx+DA 0611
Logbook Pg. No.: 9 A+B

Sampled by: R Bordman (Print) | (Sign) | (Print) | (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample results, blanks, and calibration reported
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP1	JX0 1235	ENV	GWT	1300 2-25-99	01-02	HC-1	1.1	602	7 Day	a
SP2	JX0 1236			1305 2-25-99						
SP3	JX0 1237			1310 2-25-99						
SP4	JX0 1238			1320 2-25-99						
SP5	JX0 1239			1330 2-25-99			1.1			
SP5	JX0 1239			1330 2-25-99	03-01	H2 SO4	3.0	FL PRO		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
[signature]	[signature]	2-25-99	1430	Tran to Lab

COMMENTS/INSTRUCTIONS

JR5610

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick up by Lab
Ship to: Enco Lab

Airbill No. ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP5	JX0 1239	Env	GWT	2-25-99, 13[illegible]	05	NA	5.0	PH	7 Day	
SP5	JX0 1239	Env	GWT	2-25-99, 13[illegible]	06	HNO3	6.1	RECA Total metals		

JR 5610

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR6070
DATE SUBMITTED: March 31, 1999
DATE REPORTED : April 19, 1999

PAGE 1 OF 8

ATTENTION: Mr. Ron Boardman

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

WO# 073

Bldg. 880 Weekly

03/29/99

#1 - JX01317 @ 11:00
#2 - JX01318 @ 11:05
#3 - JX01319 @ 11:10
#4 - JX01320 @ 11:15
#5 - JX01321 @ 11:20

PROJECT MANAGER Scott D Mart
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01317		JX01318	Units
Methyl tert-butyl ether	**150**	D1	**24**	µg/L
Benzene	**72**		1.0 U	µg/L
Toluene	1.0 U		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	**2.6**		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	*		125	59-132
Date Analyzed	04/01/99		04/01/99	

* = Surrogate recovery unavailable due to matrix interference.
U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01319		JX01320	Units
Methyl tert-butyl ether	20 U	D2	10	µg/L
Benzene	220	D2	28	µg/L
Toluene	47	D2	2.5	µg/L
Chlorobenzene	10 U	D2	1.0 U	µg/L
Ethylbenzene	82	D2	11	µg/L
m-Xylene & p-Xylene	160	D2	13	µg/L
o-Xylene	63	D2	1.3	µg/L
1,3-Dichlorobenzene	10 U	D2	1.0 U	µg/L
1,4-Dichlorobenzene	10 U	D2	1.0 U	µg/L
1,2-Dichlorobenzene	10 U	D2	1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	99		*	59-132
Date Analyzed	04/05/99		04/01/99	

* = Surrogate recovery unavailable due to matrix interference.
U = Compound was analyzed for but not detected to the level shown.
D2 = Analyte value determined from a 1:10 dilution.

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01321	LAB BLANK	Units
Methyl tert-butyl ether	120	2.0 U	µg/L
Benzene	22	1.0 U	µg/L
Toluene	2.6	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	7.9	1.0 U	µg/L
m-Xylene & p-Xylene	13	1.0 U	µg/L
o-Xylene	3.2	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	137*	121	59-132
Date Analyzed	04/01/99	04/01/99	

* = Surrogate recovery outside of laboratory established limits.
U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01321	LAB BLANK	Units
Arsenic	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		04/09/99	04/07/99	
Barium	200.7	0.10 U	0.10 U	mg/L
Date Analyzed		04/07/99	04/06/99	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		04/07/99	04/06/99	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		04/07/99	04/06/99	
Lead	200.7	0.0050 U	0.0050 U	mg/L
Date Analyzed		04/07/99	04/06/99	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		04/02/99	04/02/99	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		04/07/99	04/07/99	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		04/09/99	04/07/99	

MISCELLANEOUS	METHOD	JX01321	LAB BLANK	Units
pH	150.1	5.9	NR	S.U.
Date Analyzed		03/31/99		

U = Compound was analyzed for but not detected to the level shown.
NR = Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

FL METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01321	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	0.20 U	mg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
o-Terphenyl	83	81	65-140
Date Extracted	04/05/99	04/05/99	
Date Analyzed	04/08/99	04/08/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	LAB BLANK	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	2.0 U	µg/L
Benzene	1.0 U	1.0 U	µg/L
Toluene	1.0 U	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	1.0 U	1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U	1.0 U	µg/L
o-Xylene	1.0 U	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	119	95	59-132
Date Analyzed	04/02/99	04/05/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6070
DATE REPORTED: April 19, 1999
REFERENCE : WO# 073
PROJECT NAME : Bldg. 880 Weekly

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021 (JX01317,JX01318,JX01320,JX01321)				
Benzene	*/ */101	60-138	*	17
Toluene	85/110/106	57-138	#26	16
Ethylbenzene	100/100/105	49-144	<1	17
o-Xylene	85/ 80/104	50-151	6	17
EPA Method 602/6230D/8020/8021 (JX01319)				
Benzene	94/ 94/ 75	60-138	<1	17
Toluene	92/ 93/ 76	57-138	1	16
Ethylbenzene	101/102/ 84	49-144	<1	17
o-Xylene	102/104/ 85	50-151	2	17
Total Metals				
Arsenic, 200.7	104/100/113	64-126	4	12
Barium, 200.7	100/100/109	74-119	<1	11
Cadmium, 200.7	100/101/110	68-121	<1	12
Chromium, 200.7	102/102/110	73-120	<1	10
Lead, 200.7	103/104/112	68-126	<1	19
Mercury, 245.1	104/104/ 94	70-136	<1	12
Selenium, 200.7	103/103/115	65-129	<1	10
Silver, 200.7	96/ 97/104	69-121	1	12
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	87/ 78/ 67	51-163	11	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

* = MS/MSD/RPD unavailable due to high original sample concentration.
\# = The associated value failed to meet laboratory established criteria for precision.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

CHAIN OF CUSTODY RECORD

Site Name: NAS Jacksonville - Building 880
Delivery Order No.: 27
Cooler/Crate No.: N/A

SEIR No.: N/A
COC Number: JX331
Lab: ENCO
Field Logbook No.: JX-DA-011
Logbook Pg. No.: 11A & B

Sampled by: Ron Boardman (Print) R. Boardman / L/C (Sign) (Print) (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample results, blanks, and calibration reported
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01317	ENV	GWT	3/29/99 / 11:00	01:02	HCl	1.1	602	7 day	C
SP-2	JX01318	|	|	| 11:05	01:02	HCl	|	|	|	|
SP-3	JX01319	|	|	| 11:10	01:02	HCl	|	|	|	|
SP-4	JX01320	|	|	| 11:15	01:02	HCl	|	|	|	|
SP-5	JX01321	|	|	| 11:20	01:02	HCl	|	|	|	|
SP-5	JX01321	|	|	| 11:20	03:04	H_2SO_4	3.1	FL PRO	|	|

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canelos	C. Kohn	3/30/99	1120	Transport to Lab for Analysis
C. Kohn	Scott D Mitz	3/30/99	1200	Log in lab

COMMENTS/INSTRUCTIONS
Results to: Bill Canelos

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by ENCO Lab
Ship to: ENCO Labs in Jacksonville FL

Airbill No. ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

COC # JX331

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01321	ENV	GWT	3/29/99 11:20	05	none	5.0	pH	7 day	C
SP-5	JX01321	1	1	1 1	06	HNO_3	6.1	8 RCRA Total metals	1	1

ATTACHMENT E

SYSTEM PERFORMANCE DATA

SOIL VAPOR EXTRACTION SYSTEM
OPERATING DATA
BUILDING 880

Date	Flow Rate (cfm)	Blower Inlet Vacuum (inches Hg)	Blower Discharge Pressure (inches Water Column)
12/03/98	400	10	NR
12/07/98	400	10	NR
12/08/98	400	10	NR
12/09/98	400	10	NR
12/10/98	400	10	NR
12/14/98	400	10	NR
12/16/98	400	10	NR
12/23/98	400	10	NR
12/29/98	400	9.5	12
01/07/99	425	9.4	10
02/25/99	400	9	5
03/29/99	400	10	4

NR = no reading

SOIL VAPOR EXTRACTION SYSTEM
OVA READINGS
BUILDING 880

Date	Sample date								
	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)	[illegible] (ppm)
12/08/98	254	1,258	1,588	662	568	450	12	11	65
12/10/98	1,152	782	958	104	91	321	4	86	60
12/14/98	62	49	30	105	3	179	3	9	12
12/16/98	1,488	1,168	1,317	2	3	301	2	59	22
12/23/98	634	670	744	3	14	260	345	297	71
12/29/98	965	950	363	3	21	192	280	720	80
01/07/99	686	506	548	240	12	22	NA	92	18
02/25/99	279	337	461	16	292	77	81	214	56
03/29/99	61	13	60	460	174	65	150	240	23

ppm = parts per million
NA = not accessible

GROUNDWATER RECOVERY SYSTEM
OPERATING DATA
BUILDING 880

Period	Hour Meter Run Time (hours)				Total Recovery for the Period (gallons)					Average Flow Rate (gpm)				
	RW-1	RW-2	RW-3	RW-4	RW-1	RW-2	RW-3	RW-4	Combined	RW-1	RW-2	RW-3	RW-4	Combined
10/5/98 thru 10/31/98	16.7	NR	NR	271	7,875	NR	NR	95,840	103,715	0.2	NA	NA	5.9	6.4
11/1/98 thru 11/30/98	172.2	330.6	401.8	669.1	24,215	47,750	60,440	111,110	243,515	0.6	2.4	2.5	2.8	6.1
12/1/98 thru 12/31/98	193.8	130.3	712.2	719.1	30,973	7,050	162,867	116,060	316,950	0.7	0.9	3.8	2.7	7.3
1/1/99 thru 1/31/99	56.9	116	537.3	564.9	13,627	24,590	123,313	67,150	228,680	0.4	3.5	3.8	2.0	6.7
2/1/99 thru 2/28/99	16.5	655.5	644.2	656.3	4,670	125,530	160,260	109,250	399,710	0.1	3.2	4.1	2.8	10.2
3/1/99 thru 3/31/99	90.7	600.6	601.3	601.3	30,630	110,490	212,410	115,530	469,060	0.8	3.1	5.9	3.2	13.0
AVERAGE	91.1	366.6	579.4	580.3	18,665	63,082	143,858	102,490	293,605	0.5	2.6	4.0	3.2	8.3
TOTAL	546.8	1833	2896.8	3481.7	111,990	315,410	719,290	614,940	1,761,630	NA	NA	NA	NA	NA

Note: RW-1 operates on cycle and does not run continuously

NR = no reading

NA = not applicable

SOIL VAPOR EXTRACTION SYSTEM
CONTAMINANT MASS REMOVAL RATES
BUILDING 880

			Concentration (mg/m³)			Mass Removal Rate (lb/day)		
Location	Date	Total Flow Rate (cfm)	Benzene	Total VOA	TLPH	Benzene	Total VOA	TLPH
Blower Discharge (influent) (V-4)	12/07/98	400	44	272	1,300	1.6	9.8	46.8
	12/08/98	400	34	222	1,000	1.2	8.0	36.0
	12/09/98	400	42	251	760	1.5	9.0	27.3
	12/10/98	400	38	235	740	1.4	8.5	26.6
	12/14/98	400	19	164	670	0.7	5.9	24.1
	12/16/98	400	23	174	760	0.8	6.3	27.3
	12/23/98	400	7.7	49.9	210	0.3	1.8	7.6
	12/29/98	400	16	140	580	0.6	5.0	20.9
	01/07/99	425	7.2	84.2	290	0.3	3.2	11.1
	02/25/99	400	<2.5	85.9	700	<0.1	3.1	25.2
	03/29/99	400	<2.5	32.1	500	<0.1	1.2	18.0

mg/m^3 = milligram per cubic meter

Total VOA = Sum of Benzene, Toluene, Ethylbenzene, and Total Xylenes

TLPH = Total Light Petroleum Hydrocarbons

$$\text{Mass Removal Rate, lb per day} = \frac{\text{flowrate, cfm} \times \text{concentration, mg/m}^3}{453{,}590 \text{ mg/lb}} \times \frac{1440 \text{ min/day}}{35.31 \text{ ft}^3/\text{m}^3}$$

GROUNDWATER RECOVERY SYSTEM
CONTAMINANT MASS REMOVAL RATES
BUILDING 880

			Concentration, ug/L			Mass Removed (lbs per period)		
Location	Period	Total Flow for Period gallons	Benzene	Total VOA	MTBE	Benzene	Total VOA	MTBE
Discharge	11/1/98 thru 11/30/98	243,515	193	463	67	0.392	0.941	0.136
To Sanitary	12/1/98 thru 12/31/98	316,950	75	164	53	0.198	0.434	0.140
Sewer	1/1/99 thru 1/31/99	228,680	118	327	40	0.225	0.624	0.076
(SP-5)	2/1/99 thru 2/28/99	399,710	65	209	36	0.217	0.697	0.120
	3/1/99 thru 3/31/99	469,060	22	48.7	120	0.086	0.191	0.470

ug/L = microgram per liter
Total VOA = Sum of Benzene, Toluene, Ethylbenzene, and Total Xylenes
MTBE = Methyl tert-butyl ether

$$\text{Mass Removal, lb per period} = \frac{\text{total flow, gals} \times \text{concentration, ug/L}}{453{,}590{,}000 \text{ ug/lb}} \times 3.785 \text{ L/gal}$$

where: total flow is the total gallons recovered for the period

Quarterly Operations and Maintenance Report
for NAS Jacksonville Building 880
Second Quarter 1999

Start Date: 4/1/99
End Date: 6/30/99
Report Date: 8/11/99

SITE BACKGROUND

The site is located at NAS Jacksonville at the NEX Service Station (hereinafter referred to as Building 880). The actual Building 880, associated with the Service Station construction, no longer exists. The NEX Service Station was constructed in 1975. Gasoline was stored in underground storage tanks at the site and dispensed for the purpose of motor vehicle refueling. A contamination assessment was conducted and a remedial action plan (RAP) was prepared and approved by the Florida Department of Environmental Protection (FDEP) to address the soil and groundwater impacts from the gasoline refueling operation. Subsequent to RAP approval, a soil vapor extraction (SVE)/groundwater recovery (GWR) system was installed at the site. System startup occurred on October 5, 1998.

DESCRIPTION OF TECHNOLOGIES UTILIZED

SVE and GWR are the remediation technologies utilized at Building 880.

SVE is a method by which negative pressure, or vacuum, is applied to vapor extraction laterals in the vadose zone. The actual removal is accomplished by lowering the relative pressure in the soil mass below the equilibrium pressure of the contaminant using a vacuum blower. The contaminant in the soil will volatilize and be removed via the soil vapor extraction laterals. At Building 880, soil vapors are extracted from a series of laterals. The extracted vapors are treated by two 2,000-lb granular activated carbon (GAC) units prior to being discharged to the atmosphere. A map showing the locations of the vapor extraction laterals is provided in Attachment A.

GWR is a method by which impacted groundwater is recovered, treated and discharged. At Building 880, groundwater is recovered by 2 recovery wells, a series of 18 manifolded extraction wells, and one recovery trench. The recovered groundwater is directed to the sanitary sewer for offsite treatment and discharge. A map showing the locations of the recovery wells and the recovery trench is provided in Attachment A.

SUMMARY OF ACTIVITIES

Monitoring Activities

General system maintenance checks were performed daily during the second quarter of 1999. System operating parameters were recorded, and system adjustments were performed during each maintenance check. System operating parameters are tabulated in Attachment E.

Start Date: 4/1/99
End Date: 6/30/99
Report Date: 8/11/99

The SVE system was in operation 83.6% (1825.4 hours out of a possible 2,184 hours) of the time during the monitoring period. The downtime was caused by a broken belt on the SVE blower, electrical problems with the heat exchanger, and a high water table due to the excessive rain during June and low pump capacity of RW-4 compared to the capacity of the recovery trench.

Flow Rates

The average flow rate for the ground water remediation system was 7.0 gallons per minute (gpm) during the monitoring period, compared to the RAP design flow rate of 20 gpm. This flow rate is reduced due to the downtime detailed above and due to the well pumps not able to achieve the maximum flow rates due to system backpressure from iron fouling. A total of 790,160 gallons of groundwater were recovered during the monitoring period. Individual well/trench recoveries and flow rates are tabulated in Appendix E.

The average flow rate for the SVE system was 399 cubic feet per minute (cfm) during the monitoring period at an average vacuum of 9.6 inches of mercury, compared to the RAP design of 560 cfm at 7.7 inches of mercury. Operating data for the SVE system are tabulated in Attachment E.

Estimated Contaminant Mass Removal Rates

The GWR system removed 2.2 lbs of contaminants (total volatile organics) from the groundwater during the second quarter of 1999. The GWR system groundwater contaminant mass removal rates are tabulated in Attachment E. The SVE system removed 30.4 lbs of contaminants (total light petroleum hydrocarbons) from the soil during the second quarter of 1999. The SVE system contaminant mass removal rates are tabulated in Attachment E.

Status of Remediation

As of the writing of this report, the GWR system is presently fully operational. The analytical results from the groundwater sampling indicate a decreasing trend in the concentration of benzene, ethylbenzene, toluene, total xylenes, total volatile organics, and methyl tert-butyl ether. The GWR system will continue operation, as contaminant levels still exceed FDEP No Further Action and Natural Attenuation limits.

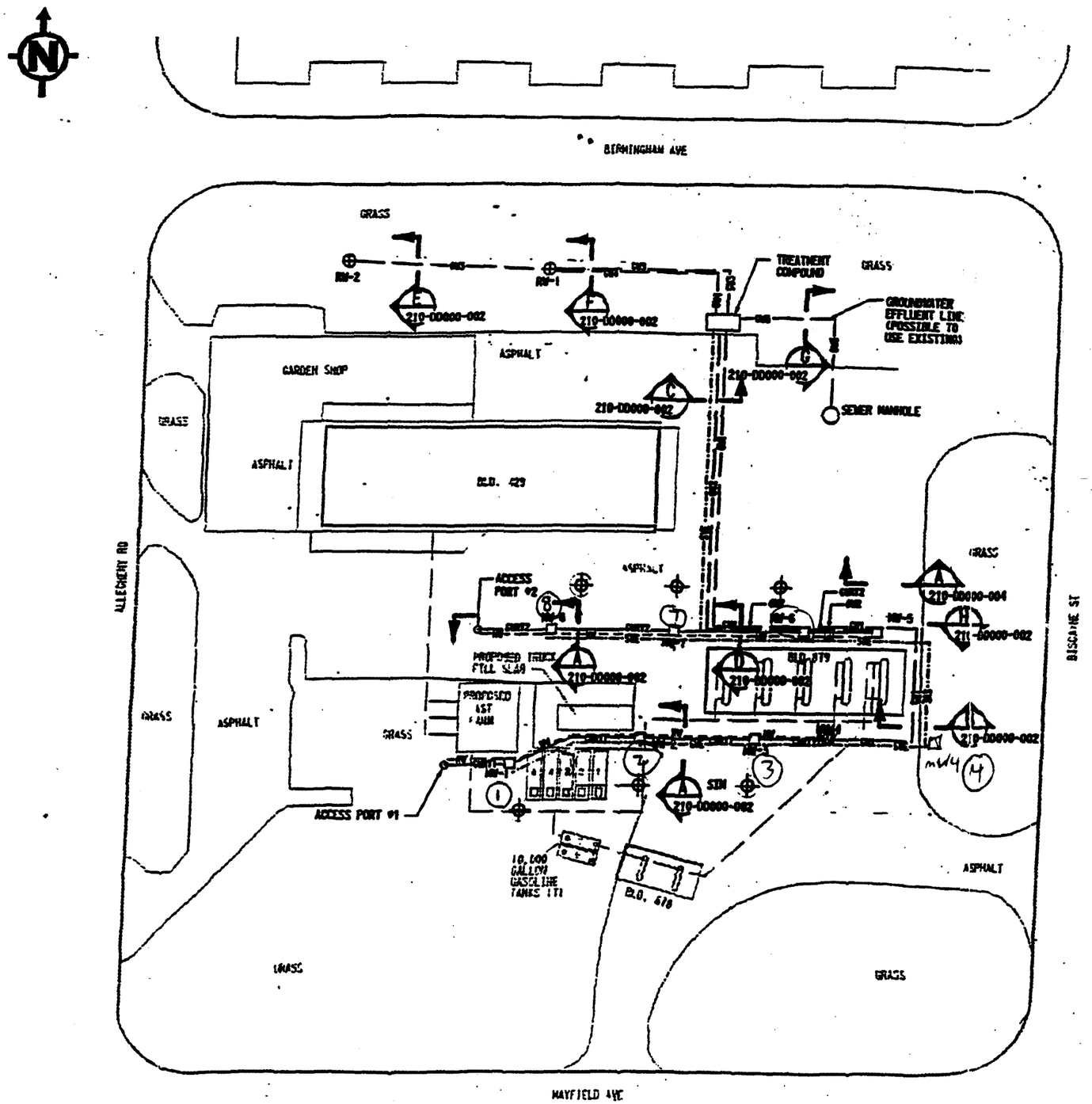
As of the writing of this report, the SVE system is presently fully operational. The analytical results from the air sampling indicate a decreasing trend in the concentration of benzene, toluene, ethylbenzene, total xylenes, total volatile organics, and total light petroleum hydrocarbons. The SVE system will continue operation until non-detectable levels are sustained in the influent air stream.

ATTACHMENTS

A. Site Map
B. Summary of Air and Groundwater Analytical Data
C. Analytical Laboratory Reports For Air Samples
D. Analytical Laboratory Reports For Groundwater Samples
E. System Performance Data

ATTACHMENT A

SITE MAP



NOTES

1. UNPAVED AREAS WITHIN 30' OF THE VAPOR EXTRACTI BE COVERED WITH 6 MIL PLASTIC WITH DECORATIVE GRAVEL).
2. SVE MANWAYS: MW-1, MW-2, MW-3, MW-6, MW-7, AND
3. GROUNDWATER RECOVERY TRENCH MANWAYS: MW-4 AND
4. UNDERGROUND STORAGE TANKS 1, 2, 3, 4 & 5 WILL AND REPLACED WITH THE PROPOSED ABOVE GROUND STO FARM. (BY OTHERS)
5. ALL PIPING RUNS ARE BELOW GRADE. PIPE LINES SH STACKED VERTICALLY, RUNNING PARALLEL IN SAME TRE
6. SITE PIPING PLAN WAS BASED ON FIGURES 9 & 10 ST OF THE NAS JACKSONVILLE - BUILDING 880 REMEDIAL AMENDMENT 2 BY RUST ENVIRONMENTAL & INFRASTRUCTU MARCH 1996.
7. PIEZOMETER WELLS ARE SPACED AT 10 FT, 20 FT, AND INTERVALS FROM THE SVE HORIZONTAL WELLS. EACH S PIEZOMETERS ARE APPROXIMATELY 60 FT APART AROUND PERIMETER OF THE SVE WELLS.
8. GROUNDWATER LINES GW1, GW2, GW3 AND GW4 SHALL BE TESTED TO 50 PSI FOR 2 HOURS. ALL INSTRUMENTS AN SHALL BE REMOVED FOR TESTING. NO PRESSURE LOSS S RECORDED.
9. FOR PULL BOXES LOCATION SEE DRAWING 219-00000-010. ADDITIONAL PULL BOXES SHALL BE AASHTO H20 LOAD RA

REFERENCE DRAWINGS

LAYOUT SECTIONS	2
SVE MANWAY DETAIL AND SECTION	2
GROUNDWATER RECOVERY WELL AND TRENCH DETAILS	2
COMPOUND LAYOUT	2
COMPOUND LAYOUT SECTIONS	2
GROUNDWATER EXTRACTION SYSTEM P&ID	2
SOIL VAPOR EXTRACTION (SVE) SYSTEM P&ID	2

LEGEND

- PROPOSED SVE VACUUM HEADER
- PROPOSED SVE HORIZONTAL WELL (SLOTTED)
- PROPOSED GROUNDWATER PIPING
- PROPOSED GROUNDWATER RECOVERY TRENCH PIPING
- OTHER UNDERGROUND PIPING (EXISTING)
- RW-1 PROPOSED GROUNDWATER RECOVERY WELL
- MW-1 PROPOSED MANWAY
- PROPOSED PIEZOMETER WELL

0 40 80 120

1"=40'

NO.	DATE	REVISIONS	BY	CHKD	APP'D
4		REVISED PIEZOMETERS (PRELIMIN			
3	11/20/96	REVISED FOR CLARIFICATION	BRB	JMB	RAA
2	11/25/96	ISSUE FOR CONSTRUCTION	JMB	DLF	RAA

SCALE N/A

BECHTEL ENVIRONMENTAL
OAK RIDGE, TENNESSEE

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION NAVAL FACILITIES ENGINEERING
CHARLESTON, SOUTH CAROLINA

NAS JACKSONVILLE - BUILDING 880
SITE PIPING PLAN

JOB NO.	DRAWING NO.
	219-00000-001

ATTACHMENT B

SUMMARY OF AIR AND GROUNDWATER ANALYTICAL DATA

SOIL VAPOR EXTRACTION SYSTEM
INFLUENT/EFFLUENT AIR TREATMENT ANALYTICAL RESULTS
BUILDING 880

Location	Date	Sample ID	Benzene (mg/m³)	Toluene (mg/m³)	Ethylbenzene (mg/m³)	Total Xylene (mg/m³)	Total VOA (mg/m³)	TLPH (mg/m³)
Blower Discharge (influent) (V-4)	12/07/98	JX01117	44	48	30	150	272	1,300
	12/08/98	JX01126	34	39	23	126	222	1,000
	12/09/98	JX01134	42	52	34	123	251	760
	12/10/98	JX01136	38	50	34	113	235	740
	12/14/98	JX01141	19	26	18	101	164	670
	12/16/98	JX01151	23	27	18	106	174	760
	12/23/98	JX01177	7.7	14	4.3	23.9	49.9	210
	12/29/98	JX01185	16	20	15	89	140	580
	01/07/99	JX01192	7.2	12	8	57	84.2	290
	02/25/99	JX01240	<2.5	13	7.9	65	85.9	700
	03/29/99	JX01322	<2.5	5.6	2.5	24	32.1	500
	05/25/99	JX01354	<0.50	<0.50	<0.50	<0.50	<0.50	10
Carbon Discharge (effluent) (GAC2SP)	12/07/98	JX01118	110	<25	<25	<25	110	1,800
	12/08/98	JX01127	100	47	<25	<25	147	2,000
	12/09/98	JX01135	54	52	<2.5	4.6	110.6	1,200
	12/10/98	JX01137	63	70	<12	<12	133	1,100
	12/14/98	JX01142	31	67	<12	<12	98	1,000
	12/16/98	JX01152	36	90	<12	<12	126	1,400
	12/23/98	JX01178	<12	18	30	72	120	500
	12/29/98	JX01186	<12	16	21	119	156	560
	01/07/99	JX01193	<12	<12	<12	100	100	360
	02/25/99	JX01241	<2.5	17	12	122	151	1,200
	03/29/99	JX01323	<0.50	<0.50	<0.50	<0.50	<0.50	18
	05/25/99	JX01355	<0.50	<0.50	<0.50	<0.50	<0.50	50

mg/m^3 = milligram per cubic meter
Total VOA = Sum of Benzene, Toluene, Ethylbenzene and Total Xylenes
TLPH = Total Light Petroleum Hydrocarbons

GROUNDWATER RECOVERY SYSTEM
ANALYTICAL RESULTS
BUILDING 880

Sample Location	Date	BEI Sample ID	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	Total VOA (ug/L)	MTBE (ug/L)	EL PRQ (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	pH
RW-1	11/23/98	JX01060	120	1.4	1.2	<1.0	122.6	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-1)	11/24/98	JX01065	120	1.8	6.1	<1.0	127.9	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01070	130	1.2	2.1	<1.0	133.3	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01084	94	1.3	2.2	<1.0	97.5	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	JX01090	320	3.8	14	<1.0	337.8	460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01097	86	<1.0	<1.0	<1.0	86	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01103	91	<1.0	<1.0	<1.0	91	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01111	110	1.8	2.5	<1.0	114.3	590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01129	110	1.7	<1.0	<1.0	111.7	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01146	79	<1.0	<1.0	<1.0	79	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/23/98	JX01172	63	2.9	4.5	<1.0	70.4	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/98	JX01181	52	<1.0	<1.0	<1.0	52	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/07/99	JX01188	59	2.6	3	<1.0	64.6	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/14/99	JX01198	24	<1.0	<1.0	<1.0	24	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01203	4	<1.0	<1.0	<1.0	4	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01235	46	6.9	9.1	<1.0	62	340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/29/99	JX01317	72	2.6	<1.0	<1.0	74.6	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/25/99	JX01349	48	1.2	<1.0	<1.0	49.2	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RW-2	11/23/98	JX01061	1.2	<1.0	1	1.1	3.3	72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-2)	11/24/98	JX01066	1.5	<1.0	<1.0	<1.0	1.5	98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01071	<1.0	<1.0	<1.0	<1.0	<1.0	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01085	<1.0	<1.0	<1.0	<1.0	<1.0	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	JX01091	<1.0	<1.0	<1.0	<1.0	<1.0	2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01098	1.5	<1.0	<1.0	<1.0	1.5	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01104	<1.0	<1.0	<1.0	<1.0	<1.0	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01112	<1.0	<1.0	<1.0	<1.0	<1.0	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01130	<1.0	<1.0	<1.0	<1.0	<1.0	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01147	<1.0	<1.0	<1.0	<1.0	<1.0	64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01204	1.2	NA	NA	NA	1.2	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01236	6	<1.0	5	<1.0	11	93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/29/99	JX01318	<1.0	<1.0	<1.0	<1.0	<1.0	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/25/99	JX01350	<1.0	<1.0	<1.0	<1.0	<1.0	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

GROUNDWATER RECOVERY SYSTEM
ANALYTICAL RESULTS
BUILDING 880

Sample Location	Date	BEI Sample ID	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	Total VOA (ug/L)	MTBE (ug/L)	FL PRO (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	pH (S.U.)
RW-3	11/23/98	JX01062	410	130	120	440	1100	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-3)	11/24/98	JX01067	400	140	100	370	1010	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01072	420	120	88	370	998	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01086	350	130	100	390	970	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01099	290	67	64	253	674	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01105	230	64	63	217.5	574.5	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01113	110	80	63	244	497	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01131	280	100	83	350	813	61	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01148	180	23	17	114	334	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/23/98	JX01174	120	65	51	178	414	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/98	JX01182	160	54	46	197	457	67	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/07/99	JX01189	9	2.4	5	3.9	20.3	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/14/99	JX01199	380	120	110	490	1100	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01205	230	79	71	306	686	71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01237	100	71	46	165	384	88	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/29/99	JX01319	220	82	47	223	572	<20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/25/99	JX01351	170	53	30	139	392	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RW-4	11/23/98	JX01063	76	60	4.1	29	169.1	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-4)	11/24/98	JX01068	84	74	2.4	24	184.4	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/25/98	JX01073	98	100	3.9	39.5	241.4	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	JX01087	86	52	<10	32	170	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/01/98	JX01093	87	38	4	25	154	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/02/98	JX01100	44	20	1.4	17	82.4	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/03/98	JX01106	49	20	2	19	90	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/07/98	JX01114	110	53	3.6	55.5	222.1	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/09/98	JX01132	3.9	<1.0	<1.0	2.4	6.3	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/16/98	JX01149	23	4 9	<1.0	9.2	37 1	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/23/98	JX01175	42	27	3.3	23.3	95 6	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/29/98	JX01183	34	21	1.7	18	74 7	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/07/99	JX01190	15	4.1	<1.0	4 8	23 9	2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/14/99	JX01200	33	9	1.2	4.3	47 5	<2 0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/28/99	JX01206	57	57	3	35	152	<2 0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/25/99	JX01238	88	74	54	159	375	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

GROUNDWATER RECOVERY SYSTEM
ANALYTICAL RESULTS
BUILDING 880

Sample Location	Date	BEI Sample ID	Benzene (ug/L)	Ethylbenzene (ug/L)	Toluene (ug/L)	Total Xylenes (ug/L)	Total VOA (ug/L)	MTBE (ug/L)	FL PRO (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Mercury (mg/L)	Selenium (mg/L)	Silver (mg/L)	pH (s.u.)
RW-4	03/29/99	JX01320	28	11	2.5	14.3	55.8	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(SP-4)	05/25/99	JX01352	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
continued																		
Combined	11/23/98	JX01064	100	40	17	73	230	70	<1.0	0.01	0.11	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<1.010	6.1
Discharge	11/24/98	JX01069	270	98	74	250	692	67	2.0	<0.010	0.12	<0.0010	<0.010	0.014	<0.00020	<0.010	<0.010	6.0
To Sanitary	11/25/98	JX01074	170	60	37	148	415	62	1.0	<0.010	0.11	<0.0010	<0.010	0.009	<0.00020	<0.010	<0.010	5.9
Sewer	11/30/98	JX01088	230	80	6	200	516	70	0.3	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.1
(SP-5)	12/01/98	JX01094	55	19	2.4	16	92.4	42	<0.20	<0.010	0.15	<0.0010	<0.010	0.009	<0.00020	<0.010	<0.010	6.0
	12/02/98	JX01101	110	32	21	102	265	50	0.5	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.2
	12/03/98	JX01107	73	16	11	47.2	147.2	45	<0.20	<0.010	0.13	<0.0010	<0.010	0.005	<0.00020	<0.010	<0.010	6.0
	12/07/98	JX01115	49	14	7	36.7	106.7	51	0.23	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.5
	12/09/98	JX01133	81	19	18	75	193	66	<0.20	0.01	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.4
	12/16/98	JX01150	100	11	6.2	35.7	152.9	61	0.23	<0.010	0.13	<0.0010	<0.010	0.015	<0.00020	<0.010	<0.010	5.8
	12/23/98	JX01176	80	37	25	94	236	28	0.5	0.022	<0.20	<0.0020	<0.020	<0.010	<0.00020	<0.020	<0.020	6.1
	12/29/98	JX01184	49	22	9	39	119	84	0.4	<0.010	<0.10	<0.0010	<0.010	0.008	<0.00020	<0.010	<0.010	6.1
	01/07/99	JX01191	11	2.4	1.1	4.9	19.4	8.4	<0.20	0.023	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.6
	01/14/99	JX01201	270	74	71	343	758	60	0.5	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.3
	01/28/99	JX01207	73	46	13	72	204	51	0.32	0.025	0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	6.1
	02/25/99	JX01239	65	38	21	85	209	36	0.30	<0.010	0.11	<0.0010	<0.010	<0.0050	<0.00020	<0.020	<0.010	6.3
	03/29/99	JX01321	22	7.9	2.6	16.2	48.7	120	<0.20	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	5.9
	05/25/99	JX01353	140	41	26	120	327	70	<0.20	<0.010	<0.10	<0.0010	<0.010	<0.0050	<0.00020	<0.010	<0.010	5.6

RW = recovery well

ug/L = microgram per liter

mg/L = miligram per liter

Total VOA = sum of benzene, ethylbenzene, toluene, and total xylenes

MTBE = methyl tert-butyl ether

s u = standard pH units

ATTACHMENT C

ANALYTICAL LABORATORY REPORTS FOR AIR SAMPLES

Environmental Conservation Laboratories, Inc.
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR6915
DATE SUBMITTED: May 26, 1999
DATE REPORTED : June 7, 1999

ATTENTION: Mr. Bill Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: WO# JX089

Bldg. 880

05/25/99

#1 - JX01354 @ 10:30
#2 - JX01355 @ 10:30

PROJECT MANAGER Scott D Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR6915
DATE REPORTED: June 7, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	JX01354	JX01355	Units
Benzene	0.50 U	0.50 U	mg/m^3
Toluene	0.50 U	0.50 U	mg/m^3
Ethylbenzene	0.50 U	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	0.50 U	mg/m^3
o-Xylene	0.50 U	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	76	79	72-127
Date Analyzed	05/28/99	05/28/99	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	JX01354	JX01355	Units
TLPH	10	50	mg/m^3
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	76	79	73-127
Date Analyzed	05/28/99	05/28/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6915
DATE REPORTED: June 7, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 18 - VOLATILE AROMATICS IN AIR	LAB BLANK	Units
Benzene	0.50 U	mg/m^3
Toluene	0.50 U	mg/m^3
Ethylbenzene	0.50 U	mg/m^3
m-Xylene & p-Xylene	0.50 U	mg/m^3
o-Xylene	0.50 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	82	72-127
Date Analyzed	06/02/99	

EPA METHOD 18 - LIGHT PETR. HYDROCARBONS	LAB BLANK	Units
TLPH	10 U	mg/m^3
Surrogate:	**% RECOV**	**LIMITS**
Bromofluorobenzene	82	73-127
Date Analyzed	06/02/99	

= Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6915
DATE REPORTED: June 7, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 18				
Benzene	122/120/119	83-123	2	22
Toluene	114/107/ 81	89-110	6	11
Ethylbenzene	116/113/115	72-123	3	20
o-Xylene	114/100/115	90-110	13	28
EPA Method 18				
TLPH	122/120/119	83-123	2	49

Environmental Conservation Laboratories Comprehensive QA Plan #960038

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

PJR456

CHAIN OF CUSTODY RECORD

BECHTEL

Site Name: NAS Jacksonville Bldg. 880 Quarterly
Delivery Order No.: 27
Cooler/Crate No.: N/A

SEIR No.: N/A
COC Number: JX 352
Lab: ENCO
Field Logbook No.: JX-DA-013
Logbook Pg. No.: 41-42

Sampled by: R. Dunnap (Print) — (Sign) — (Print) — (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample results, blanks, and calibration reported
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
V4	JX01354	ENV	AIR	5/25/99 1030	01	N/A	15.0	TO-3	7day	C
GAC2sp	JX01355	1	1	5/25/99 10:30	01	N/A	15.0	TO-3	1	1

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W. Canelos	C. Cohn	5/25/99	16:10	Transport to Lab for Analysis

COMMENTS/INSTRUCTIONS

Results TO B. Canelos
FX: 779-8999

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by ENCO Labs
Ship to: ENCO Labs in Jacksonville, FL

Airbill No. ____ Traffic Report No. ____

JR 6915

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910.

ATTACHMENT D

ANALYTICAL LABORATORY REPORTS FOR GROUNDWATER SAMPLES

Environmental Conservation Laboratories, Inc.
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
904 / 296-3007
Fax 904 / 296-6210
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E82277

CLIENT : Bechtel Environmental, Inc.
ADDRESS: NAS Jacksonville
P.O. Box 171
Jacksonville, FL 32215

REPORT # : JR6933
DATE SUBMITTED: May 26, 1999
DATE REPORTED : June 4, 1999

ATTENTION: Mr. Bill Canelos

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: WO# JX089

Bldg. 880

05/25/99

#1 - JX01349 @ 10:00
#2 - JX01350 @ 10:05
#3 - JX01351 @ 10:10
#4 - JX01352 @ 10:15
#5 - JX01353 @ 10:20

PROJECT MANAGER Scott D. Martin
Scott D. Martin

ENCO LABORATORIES
REPORT # : JR6933
DATE REPORTED: June 4, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01349		JX01350	Units
Methyl tert-butyl ether	250	D1	26	µg/L
Benzene	48		1.0 U	µg/L
Toluene	1.0 U		1.0 U	µg/L
Chlorobenzene	1.0 U		1.0 U	µg/L
Ethylbenzene	1.2		1.0 U	µg/L
m-Xylene & p-Xylene	1.0 U		1.0 U	µg/L
o-Xylene	1.0 U		1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U		1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U		1.0 U	µg/L
Surrogate:	% RECOV		% RECOV	LIMITS
Bromofluorobenzene	98		103	59-132
Date Analyzed	05/28/99		05/29/99	

U = Compound was analyzed for but not detected to the level shown.
D = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR6933
DATE REPORTED: June 4, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01351		JX01352	Units
Methyl tert-butyl ether	46	D1	2.0 U	µg/L
Benzene	170	D1	1.0 U	µg/L
Toluene	30	D1	1.0 U	µg/L
Chlorobenzene	5.0 U	D1	1.0 U	µg/L
Ethylbenzene	53	D1	1.0 U	µg/L
m-Xylene & p-Xylene	100	D1	1.0 U	µg/L
o-Xylene	39	D1	1.0 U	µg/L
1,3-Dichlorobenzene	5.0 U	D1	1.0 U	µg/L
1,4-Dichlorobenzene	5.0 U	D1	1.0 U	µg/L
1,2-Dichlorobenzene	5.0 U	D1	1.0 U	µg/L
Surrogate:	**% RECOV**		**% RECOV**	**LIMITS**
Bromofluorobenzene	102		107	59-132
Date Analyzed	05/29/99		05/29/99	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:5 dilution.

ENCO LABORATORIES
REPORT # : JR6933
DATE REPORTED: June 4, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD 602 - VOLATILE AROMATICS	JX01353	LAB BLANK	Units
Methyl tert-butyl ether	70	2.0 U	µg/L
Benzene	140	1.0 U	µg/L
Toluene	26	1.0 U	µg/L
Chlorobenzene	1.0 U	1.0 U	µg/L
Ethylbenzene	41	1.0 U	µg/L
m-Xylene & p-Xylene	87	1.0 U	µg/L
o-Xylene	33	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	1.0 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene	95	100	59-132
Date Analyzed	05/29/99	05/29/99	

U = Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6933
DATE REPORTED: June 4, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	JX01353	LAB BLANK	Units
Arsenic	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		06/01/99	06/01/99	
Barium	200.7	0.10 U	0.10 U	mg/L
Date Analyzed		06/01/99	06/01/99	
Cadmium	200.7	0.0010 U	0.0010 U	mg/L
Date Analyzed		06/01/99	06/01/99	
Chromium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		06/01/99	06/01/99	
Lead	200.7	0.0050 U	0.0050 U	mg/L
Date Analyzed		06/01/99	06/01/99	
Mercury	245.1	0.00020 U	0.00020 U	mg/L
Date Analyzed		05/28/99	05/28/99	
Selenium	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		06/01/99	06/01/99	
Silver	200.7	0.010 U	0.010 U	mg/L
Date Analyzed		06/01/99	06/01/99	

MISCELLANEOUS	METHOD	JX01353	LAB BLANK	Units
pH	150.1	5.6	NR	S.U.
Date Analyzed		05/27/99		

U = Compound was analyzed for but not detected to the level shown.
= Analysis not requested for this sample.

ENCO LABORATORIES
REPORT # : JR6933
DATE REPORTED: June 4, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

RESULTS OF ANALYSIS

EPA METHOD FLPRO - PETROL. RESIDUAL ORG.	JX01353	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	0.20 U	mg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
o-Terphenyl	73	94	65-140
Date Extracted	05/28/99	05/28/99	
Date Analyzed	06/02/99	06/01/99	

Compound was analyzed for but not detected to the level shown.

ENCO LABORATORIES
REPORT # : JR6933
DATE REPORTED: June 4, 1999
REFERENCE : WO# JX089
PROJECT NAME : Bldg. 880

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 602/6230D/8020/8021				
Benzene	81/ 82/ 97	60-138	1	17
Toluene	93/112/ 87	57-138	#18	16
Ethylbenzene	93/ 94/ 96	49-144	1	17
o-Xylene	94/ 94/ 97	50-151	<1	17
Total Metals				
Arsenic, 200.7	104/102/ 97	64-126	2	12
Barium, 200.7	102/101/ 99	74-119	<1	11
Cadmium, 200.7	103/102/100	68-121	<1	12
Chromium, 200.7	103/102/100	73-120	<1	10
Lead, 200.7	105/103/100	68-126	2	19
Mercury, 245.1	104/106/103	70-136	2	12
Selenium, 200.7	105/103/ 99	65-129	2	10
Silver, 200.7	106/104/101	69-121	2	12
Miscellaneous				
pH, 150.1	NA/ NA/ 99	-	NA	
PETROL. RESIDUAL ORG.				
Hydrocarbons (C8-C40)	96/ 95/ 87	51-163	1	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

= The associated value failed to meet laboratory established criteria for precision.
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

This report shall not be reproduced except in full, without the written approval of the laboratory. Results for these procedures apply only to the samples as submitted.

JR6933 PSR4

CHAIN OF CUSTODY RECORD

BECHTEL

Site Name: NAS Jacksonville Bldg. 880 Quarterly
Delivery Order No.: 27
Cooler/Crate No.: N/A

SEIR No.: N/A
COC Number: JX 357
Lab: ENCO
Field Logbook No.: JX-DA-0011
Logbook Pg. No.: 14A - 14B

Sampled by: R. Dumaop (Print) R. Dumaop (Sign) ____ (Print) ____ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blink Blank
ENV	Environmental	PTS	Point Source
FDB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MXD	Matrix Spike Duplicate	SPL	Split
MXS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SPW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SST	Surface Water Storm Event		

QC LEVELS

S Sample Results and QC
C Reported
D Sample results, QC and raw data reported
E Sample results, blanks, and calibration reported
S Screening level analysis

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SP-1	JX01349	ENV	GWT	5/25/99 10:00	01:02	HCl	1.1	602	7 day	C
SP-2	JX01350			10:05	01:02	HCl				
SP-3	JX01351			10:10	01:02	HCl				
SP-4	JX01352			10:15	01:02	HCl				
SP-5	JX01353			10:20	01:02	HCl				
SP-5	JX01353			10:20	03:04	H_2SO_4	3.1	FL PRO		

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W. Condos	C. Kohn	5/25/99	16:10	Transport to Lab for Analysis
C. Kohn	Jackson	5/26/99	1300	Login lab

COMMENTS/INSTRUCTIONS
Results To: Bill Condos
FX: 779-8999

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by ENCO Labs
Ship to: ENCO Labs in Jacksonville, FL

Airbill No. ____ Traffic Report No. ____

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s., UN2910

JR6933 JX351

CHAIN OF CUSTODY RECORD (Continued)

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
SP-5	JX01353	ENV	GWT	5/25/99 10:20	05	None	5.0	pH	7day	C
SP-5	JX01353	1	1	5/25/99 10:20	06	HNO_3	6.1	SPCRA TOTAL METALS	1	1

ATTACHMENT E

SYSTEM PERFORMANCE DATA

GROUNDWATER RECOVERY SYSTEM
OPERATING DATA
BUILDING 880

Period	Hour Meter Run Time (hours)				Total Recovery for Period (gallons)					Average Flow Rate (gpm)				
	RW-1	RW-2	RW-3	RW-4	RW-1	RW-2	RW-3	RW-4	Totals	RW-1	RW-2	RW-3	RW-4	Averages
10/5/98 thru 10/31/98	16.7	NR	NR	271	7,875	NR	NR	95,840	103,715	0.2	NA	NA	5.9	6.4
11/1/98 thru 11/30/98	172.2	330.6	401.8	669.1	24,215	47,750	60,440	111,110	243,515	0.6	2.4	2.5	2.8	6.1
12/1/98 thru 12/31/98	193.8	130.3	712.2	719.1	30,973	7,050	162,867	116,060	316,950	0.7	0.9	3.8	2.7	7.3
1/1/99 thru 1/31/99	56.9	116	537.3	564.9	13,627	24,590	123,313	67,150	228,680	0.4	3.5	3.8	2.0	6.7
2/1/99 thru 2/28/99	16.5	655.5	644.2	656.3	4,670	125,530	160,260	109,250	399,710	0.1	3.2	4.1	2.8	10.2
3/1/99 thru 3/31/99	90.7	600.6	601.3	601.3	30,630	110,490	212,410	115,530	469,060	0.8	3.1	5.9	3.2	13.0
4/1/99 thru 6/30/99	227.0	1,831.4	1,874.0	1,455.1	58,410	258,910	372,200	100,640	790,160	4.3	2.4	3.3	1.2	7.0
AVERAGE	110.5	610.7	795.1	705.3	24,343	95,720	181,915	102,226	364,541	1.0	2.6	3.9	2.9	8.1
TOTAL	773.8	3664.4	4770.8	4936.8	170,400	574,320	1,091,490	715,580	2,551,790	NA	NA	NA	NA	NA

Note: RW-1 operates on cycle and does not run continuously

NR = no reading

NA = not applicable

SOIL VAPOR EXTRACTION SYSTEM
OPERATING DATA
BUILDING 880

Date	Flow Rate (cfm)	Blower Inlet Vacuum (inches Hg)	Blower Discharge Pressure (inches Water Column)
12/03/98	400	10	NR
12/07/98	400	10	NR
12/08/98	400	10	NR
12/09/98	400	10	NR
12/10/98	400	10	NR
12/14/98	400	10	NR
12/16/98	400	10	NR
12/23/98	400	10	NR
12/29/98	400	9.5	12
01/07/99	425	9.4	10
02/25/99	400	9	5
03/29/99	400	10	4
04/01/99	400	9	NR
04/08/99	400	9.5	NR
04/15/99	400	9.5	NR
04/22/99	380	9.5	21
04/27/99	400	9.5	17
05/06/99	400	9.7	12
05/11/99	400	9.5	9.5
05/19/99	400	10	7
05/25/99	400	9.5	6.5
06/03/99	400	9.5	5
06/10/99	400	9.8	3.5
06/17/99	400	10	4
06/24/99	400	9.6	3.6
07/01/99	400	10	3.7

NR = no reading

SOIL VAPOR EXTRACTION SYSTEM
OVA READINGS
BUILDING 880

	Sample Port								
Date	Pre GACs (V4) (ppm)	Between GACs (GAC1SP) (ppm)	Post GACs (GAC2SP) (ppm)	SVE Lateral (V22) (ppm)	SVE Lateral (V23) (ppm)	SVE Lateral (V24) (ppm)	SVE Lateral (V25) (ppm)	SVE Lateral (V26) (ppm)	SVE Lateral (V27) (ppm)
12/08/98	254	1,258	1,588	662	568	450	12	11	65
12/10/98	1,152	782	958	104	91	321	4	86	60
12/14/98	62	49	30	105	3	179	3	9	12
12/16/98	1,488	1,168	1,317	2	3	301	2	59	22
12/23/98	634	670	744	3	14	260	345	297	71
12/29/98	965	950	363	3	21	192	280	720	80
01/07/99	686	506	548	240	12	22	NA	92	18
02/25/99	279	337	461	16	292	77	81	214	56
03/29/99	61	13	60	460	174	65	150	240	23
04/01/99	366	78	18	337	195	82	127	178	25
04/08/99	1	26	95	215	150	54	102	131	20
04/15/99	275	93	61	222	137	41	65	108	17
04/22/99	154	34	11	191	129	42	94	113	19
04/27/99	147	115	16	177	151	48	54	107	6
05/06/99	289	13	11	242	133	42	49	125	18
05/11/99	217	18	13	186	123	50	47	133	24
05/19/99	416	139	35	207	247	42	107	319	50
05/25/99	950	531	370	1	2	52	104	322	30
06/03/99	NR	NR	NR	NR	NR	NR	NR	NR	NR
06/10/99	NR	NR	NR	NR	NR	NR	NR	NR	NR
06/17/99	NR	NR	NR	NR	NR	NR	NR	NR	NR
06/24/99	305	70	7	NR	NR	NR	NR	NR	NR
07/01/99	331	45	15	156	112	34	NA	81	8

ppm = parts per million NA = not accessible NR = no reading

GROUNDWATER RECOVERY SYSTEM
CONTAMINANT MASS REMOVAL RATES
BUILDING 880

Location	Period	Total Flow for Period gallons	Concentration ug/L Benzene	Total VOA	MTBE	Mass Removed lb/period Benzene	Total VOA	MTBE
Discharge	11/1/98 thru 11/30/98	243,515	193	463	67	0.392	0.941	0.136
To Sanitary	12/1/98 thru 12/31/98	316,950	75	164	53	0.198	0.434	0.140
Sewer	1/1/99 thru 1/31/99	228,680	118	327	40	0.225	0.624	0.076
(SP-5)	2/1/99 thru 2/28/99	399,710	65	209	36	0.217	0.697	0.120
	3/1/99 thru 3/31/99	469,060	22	48.7	120	0.086	0.191	0.470
	4/1/99 thru 6/30/99	790,160	140	327	70	0.923	2.156	0.462

ug/L = microgram per liter
Total VOA = Sum of Benzene, Toluene, Ethylbenzene, and Total Xylenes
MTBE = Methyl tert-butyl ether

$$\text{Mass Removal, lb per period} = \frac{\text{total flow, gals} \times \text{concentration, ug/L}}{453{,}590{,}000 \text{ ug/lb}} \times 3.785 \text{ L/gal}$$

where: total flow is the total gallons recovered for the period