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NAS JACKSONVILLE
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QUARTERLY REPORTS FOR THE SOIL VAPOR EXTRACTION AND AIR SPRAGE SYSTEM BUILDING 106 AND 780 NAS JACKSONVILLE FL

3/1/1999

BECHTEL ENVIRONMENTAL, INC

QUARTERLY REPORTS

FOR THE

SOIL VAPOR EXTRACTION & AIR SPARGE SYSTEM

BUILDING 106 AND 780

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

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QUARTERLY REPORTS FOR SOIL VAPOR EXTRACTION & AIR SPARGE SYSTEM

AT BUILDINGS 106 AND 780

NAVAL AIR STATION JACKSONVILLE

Prepared for:
DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
Under Contract No. N62467-93-D-0936

Soil Vapor Extraction & Air Sparge System Quarterly Report

for NAS JACKSONVILLE - Building 106
2nd Quarter 1998

Start Date: 3/16/98
End Date: 6/30/98
Report Date: 1/15/99

OBJECTIVE:

The objective of the remediation activities at Building 106 is to clean the contaminated groundwater and unsaturated soils to acceptable levels according to Florida Department of Environmental Protection (FDEP) requirements. Soil vapor extraction (SVE) and in-situ air sparging (AS) are the two technologies utilized to achieve this objective.

SITE BACKGROUND:

The Site is located on NAS Jacksonville at Building 106 and has housed a dry cleaning facility since 1962. From 1962 to 1990, the dry cleaning operation consisted of one dry cleaning machine and one post dry cleaning machine. The system was upgraded in 1990 to a single machine that performs both dry cleaning and the drying processes. Both the current and former system configurations used tetrachlorethene (also known as perchlorethylene or PCE), which was stored in a variety of manners within Building 106.

In 1995, the Navy and its Comprehensive Long-Term Environmental Action Navy contractor performed a study that detected various degrees of chlorinated volatile organic compounds (VOCs) in the soil and groundwater at the Building 106 study areas. Historical information suggest that the substances were most likely released by spills and past operational practices.

DESCRIPTION OF TECHNOLOGIES UTILIZED:

Soil vapor extraction is performed by applying a negative pressure, or vacuum, to SVE laterals placed 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 then be removed via the SVE lateral wells.

Air sparging is a method of expediting the transfer of saturated zone VOCs from the groundwater table to the vadose zone, where a SVE system can complete the VOC removal process. Hydrocarbon-free air is injected into air sparging wells, which are screened within the groundwater contaminant plume. As the injected air passes upward through the VOC laden groundwater and soil, VOCs are partitioned to the passing air and migrate to the vadose zone. The SVE wells, which are located in the vadose zone

above the sparging area, apply a vacuum such that the sparging air is captured and removed from the subsurface.

RESULTS OF START UP PROCESS

The start up process covered a two-week period from March 16 to March 30, 1998. During this time, air samples were taken daily from SVE lateral 1, SVE Lateral 2, Mid-Carbon, and Post-Carbon locations. Start Up analytical results indicate the system is effectively treating subsurface contamination. Analytical results from these sampling events are summarized in Attachment D.

Note: Due to the size of the analytical package for the start up sampling events, copies of the analytical lab reports will not be included but can be provided upon request.

OPERATIONAL EFFICIENCIES

There are no hour meters on the SVE/AS system to base operational efficiencies, however use of the system checklists will used to produce an estimated performance efficiency. The SVE/AS systems are interlocked and will only operate together, therefore, there will be only one operating efficiency for both systems.

SVE/AS SYSTEM	This Period:	To Date:
Hours of Possible Operation:	2,568	2,568
Estimated Hours of Actual Operation:	2,560	2,560
Percent Hours of Operation:	99.7%	99.7%

SOIL VAPOR MONITORING

System soil vapor monitoring consists of weekly and monthly sampling events. The SVE influent (one from each lateral) is sampled monthly using EPA Method TO14. A point between the two carbon units is also sampled monthly using EPA Method TO14. The carbon unit discharge is sampled weekly using and EPA Method TO14. These sampling events are summarized in tables provided in Attachment B.

Soil Vapor Extraction & Air Sparge System Quarterly Report

for NAS JACKSONVILLE - Building 106
2nd Quarter 1998

Start Date: 3/16/98
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SOIL VAPOR MONITORING (cont.)

Monthly Sampling Events

Monthly sampling events at SVE influent, mid carbon, and carbon unit discharge were performed on April 23, May 19, and June 8, 1998. The analytical results as well as mass loading rates are summarized in Attachment B. Copies of the analytical laboratory reports are provided in Attachment C. A site map which shows the locations of the on-site monitoring wells, sparge wells, and SVE laterals is provided in Attachment A.

SYSTEM PERFORMANCE MONITORING

During the period, the SVE/AS system was monitored weekly to evaluate system performance. The operating parameters of the SVE system showed an average flow rate of 155 cfm at 21.8 inches of water column vacuum this created an average of 0.57 inches of water vacuum at eight associated monitoring wells. The operating parameters of the AS system showed an average air flow rate of 27 cfm at 100 inches of water column pressure providing an average of 2.7 psi at the eleven sparge wells. The individual components will continue to be adjusted in an effort to optimize performance of the SVE/AS system.

SUMMARY OF MAINTENANCE AND SYSTEM DOWN TIME

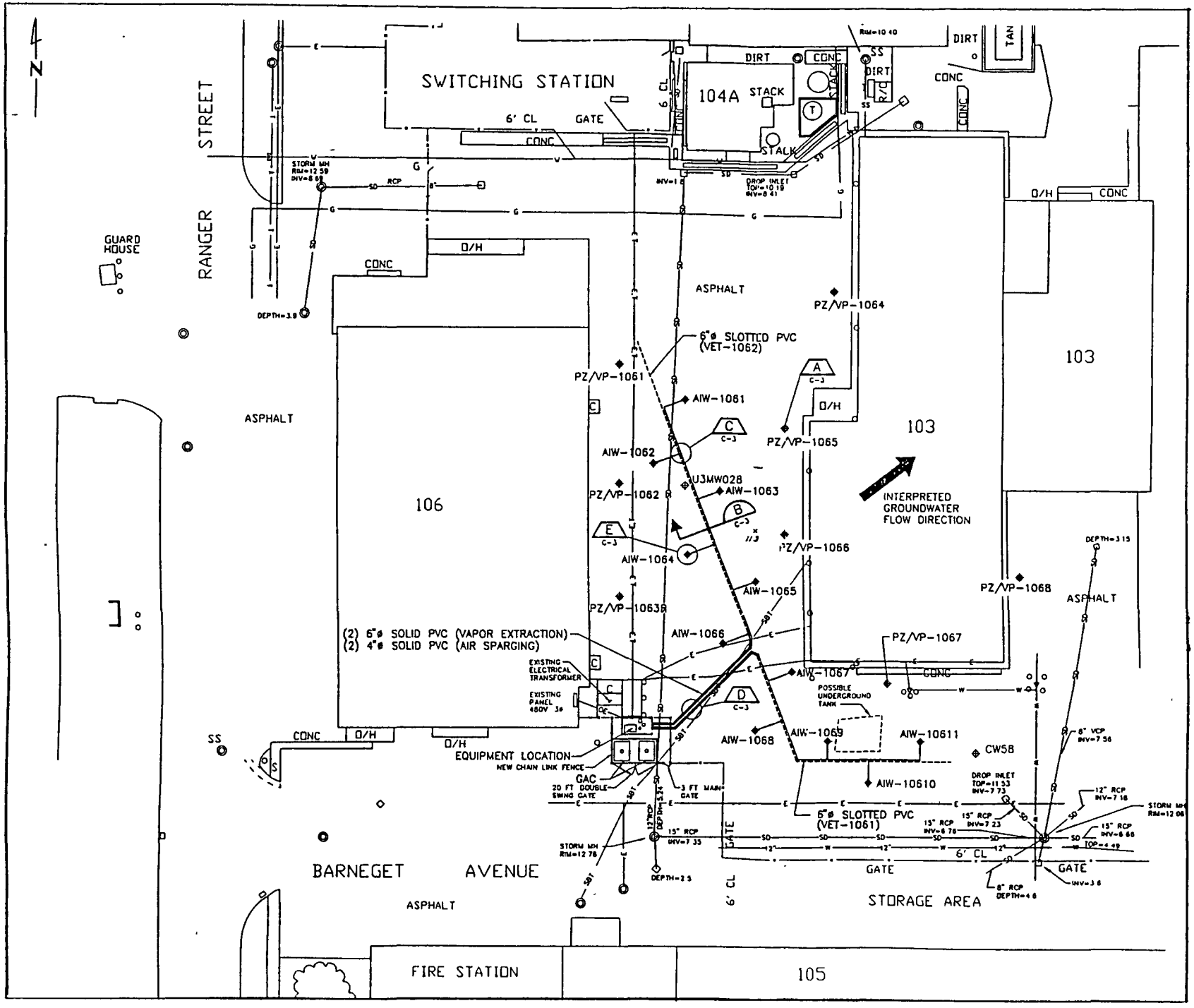
During the period of March 16 to June 30, the SVE/AS systems experienced one shut down which resulted in a total of approximately 8 hours of down time. The systems were shut down manually on May 11, 1998 to make a minor piping modification to the SVE system. The systems were restarted the same day and remained in operation for the balance of the monitoring period.

ATTACHMENTS

A. Site Map
B. Summary of Soil Vapor Analytical Data
C. Soil Vapor Analytical Laboratory Reports
D. Start Up Off Gas Analytical Results

ATTACHMENT A
SITE MAP

SOIL VAPOR EXTRACTION AND AIR SPARGE SYSTEM
SITE MAP
BUILDING 106
NAS JACKSONVILLE



ATTACHMENT B
SUMMARY OF SOIL VAPOR ANALYTICAL DATA

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
SVE Lateral #1	3/16/98	SVE-1 2100-16	0 055	7 6	14	11 000	10	42 655	0 001	0 102	0 189	0 148	0 135	0 575
north	3/17/98	SVE-106-1-0900-17	0 085	9 8	28	27 000	51	115 885	0 001	0 132	0 378	0 364	0 688	1 563
	3/17/98	SVE-1-2100	0 120	82 0	190 0	230 000	330	832 120	0 002	1 106	2 562	3 102	4 450	11 222
	3/18/98	SVE106-1-0900-18	0 058	0 039	<0 00003	0 049	0 082	0 228	0 001	0 001	<0 001	0 001	0 001	0 003
	3/18/98	SVE-1-2100-18	0 027	6 9	9 9	14 000	17	47 827	<0 001	0 093	0 134	0 189	0 229	0 645
	3/19/98	SVE106-1-0900-19	0 140	16 0	38	52 000	83	189 140	0 002	0 216	0 512	0 701	1 119	2 551
	3/19/98	SVE-106-1-2100-19	0 280	10 0	28	33 000	81	152 280	0 004	0 135	0 378	0 445	1 092	2 054
	3/20/98	SVE-106-1-0900-20	0 940	0 69	0 94	1 700	3 4	7 670	0 013	0 009	0 013	0 023	0 046	0 103
	3/22/98	SVE-106-1-0900-22	0 015	2 9	4 2	9 000	17	33 115	<0 001	0 039	0 057	0 121	0 229	0 447
	3/23/98	SVE-106-1-0900-23	0 035	0 33	0 55	1 200	4 1	6 215	<0 001	0 004	0 007	0 016	0 055	0 084
	3/24/98	SVE106-1-0900-24	0 068	1 2	2 2	5 100	26	34 568	0 001	0 016	0 030	0 069	0 351	0 466
	3/25/98	SVE106-1-0900-25	0 130	3 3	6 7	20 000	110	140 130	0 002	0 045	0 090	0 270	1 483	1 890
	3/26/98	SVE106-1-26-0900	0 230	4 6	9 9	25 000	250	289 730	0 003	0 062	0 134	0 337	3 372	3 907
	3/27/98	SVE106-1-0900-27	0 035	4 9	8 6	42 000	1,000	1055 535	<0 001	0 066	0 116	0 566	13 486	14 235
	3/28/98	SVE-106-1-0900-28	0 037	4 1	7 4	48 000	250 2500	309 537	<0 001	0 055	0 100	0 647	3 372	4 175
3/29/98	~~3/30/98~~	SVE106-1-0900-29	0 024	3 3	5 0	18 000	300	326 324	<0 001	0 045	0 067	0 243	4 046	4 401
	4/23/98	JX00875	0 0052	0 221	0 403	0 797	3 03	4 456	0 000	0 003	0 005	0 011	0 041	0 060
	5/19/98	JX00885	0 00525	2 71	4 72	8 410	30 3	46 145	0 000	0 037	0 064	0 113	0 409	0 622
	6/8/98	JX00896	0 02300	1 20	2 50	2 800	9 2	15 723	0 000	0 016	0 034	0 038	0 124	0 212

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
SVE Lateral #2 south	3/16/98	SVE-2 2100-16	0 005	0 083	0 220	0 350	1 300	1 958	<0 001	0 001	0 003	0 005	0 018	0 026
	3/17/98	SVE-106-2-0900-17	0 027	0 850	2 4	2 900	8 2	14 377	<0 001	0 011	0 032	0 039	0 111	0 194
	3/17/98	SVE-2-2100	0 011	0 160	0 410	0 550	1 8	2 931	<0 001	0 002	0 006	0 007	0 024	0 040
	3/18/98	SVE106-2-0900-18	0 014	0 190	0 460	0 620	1 9	3 184	<0 001	0 003	0 006	0 008	0 026	0 043
	3/18/98	SVE-2-2100-18	0 007	0 085	0 180	0 280	0 940	1 492	<0 001	0 001	0 002	0 004	0 013	0 020
	3/19/98	SVE106-2-0900-19	0 022	0 610	1 4	2 200	5 2	9 432	<0 001	0 008	0 019	0 030	0 070	0 127
	3/19/98	SVE-106-2-2100-19	0 027	0 480	1 1	1 900	3 5	7 007	<0 001	0 006	0 015	0 026	0 047	0 094
	3/20/98	SVE-106-2-0900-20	0 022	0 420	0 850	1 600	4 5	7 392	<0 001	0 006	0 011	0 022	0 061	0 100
	3/22/98	SVE-106-2-0900-22	0 008	0 170	0 170	0 360	0 810	1 518	<0 001	0 002	0 002	0 005	0 011	0 020
	3/23/98	SVE106-2-0900-23	0 017	0 130	0 120	0 280	0 560	1 107	<0 001	0 002	0 002	0 004	0 008	0 015
	3/24/98	SVE106-2-0900-24	0 029	0 210	0 190	0 420	1 10	1 949	<0 001	0 003	0 003	0 006	0 015	0 026
	3/25/98	SVE106-2-0900-25	0 041	0 037	0 057	0 110	0 320	0 565	0 001	<0 001	0 001	0 001	0 004	0 008
	3/26/98	SVE106-2-26-0900	0 084	0 064	0 084	0 160	0 380	0 772	0 001	0 001	0 001	0 002	0 005	0 010
	3/27/98	SVE106-2-0900-27	0 014	0 042	0 070	0 130	0 550	0 806	<0 001	0 001	0 001	0 002	0 007	0 011
	3/28/98	SVE-106-2-0900-28	0 011	0 037	0 074	0 120	0 400	0 642	<0 001	<0 001	0 001	0 002	0 005	0 009
	3/30/98	SVE106-2-0900-29	0 01	0 049	0 067	0 130	0 560	0 816	<0 001	0 001	0 001	0 002	0 008	0 011
	4/23/98	JX00876	<0 0013	<0 00202	<0 00202	0 005	0 00985	0 015	<0 001	<0 001	<0 001	<0 001	<0 001	0 000
	5/19/98	JX00886	<0 0013	0 0138	0 00762	0 018	0 0271	0 067	<0 001	<0 001	<0 001	<0 001	<0 001	0 001
	6/8/98	JX00895	0 0170	0 0780	0 07200	0 180	0 2500	0 597	0 000	0 001	0 001	0 002	0 003	0 008

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
Mid-Carbon	3/16/98	Between Carbons 2100-16	0 002	0 002	<0 00003	0 003	0 005	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	BC 0900-17	0 002	0 002	<0 00003	0 006	0 004	0 014	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	Between Carbons 2100	<0 0002	<0 00006	<0 00003	0 002	0 003	0 005	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/18/98	BC-0900-18	0 003	0 002	<0 00003	0 003	0 004	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/18/98	Between-2100-18	0 003	0 002	<0 00003	0 002	0 008	0 015	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/19/98	BC-0900-19	0 004	0 012	0 027	0 039	0 082	0 164	<0 001	<0 001	<0 001	0 001	0 001	0 002
	3/19/98	Between-2100-19	0 003	<0 00006	<0 00003	0 002	0 002	0 007	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/20/98	BC-0900-20	0 005	<0 00006	0 001	0 002	0 003	0 011	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/21/98	Between106-0900-21	0 002	0 002	<0 00003	0 002	0 003	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/22/98	Between106-0900-22	0 002	0 002	<0 00003	0 003	0 004	0 011	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/23/98	Between106-0900-23	0 004	0 033	0 041	0 170	0 810	1 058	<0 001	<0 001	0 001	0 002	0 011	0 014
	3/24/98	CB106-1-0900-24	0 006	0 002	<0 00003	0 003	0 003	0 014	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/25/98	BC-0900-25	0 011	0 002	<0 00003	0 001	0 002	0 016	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/26/98	Between106-26-0900	0 027	0 001	<0 00003	0 002	0 002	0 032	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/27/98	SVE-106-Between-0900-27	0 005	<0 00006	<0 00003	<0 0001	0 001	0 006	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/28/98	SVE-106-Between-0900-28	0 006	<0 00006	0 017	0 016	0 035	0 074	<0 001	<0 001	<0 001	<0 001	<0 001	0 001
	3/30/98	SVE-106-Between-0900-29	0 004	<0 00006	<0 00003	0 003	0 005	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	4/23/98	JX00877	<0 0130	0 00488	<0 00202	0 005	<0 00345	0 010	<0 007	<0 007	<0 001	<0 007	<0 007	0 000
	5/19/98	JX00887	0 012	<0 00202	<0 00202	<0 00273	<0 00345	0 012	0 000	<0 007	<0 007	<0 007	<0 007	0 000
	6/8/98	JX00894	0 018	0 016	<0 001	0 060	0 054	0 148	0 000	<0 002	<0 007	0 001	0 001	0 002

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
Post-Carbon	3/16/98	Discharge 2100-16	0 004	0 003	<0 00003	0 006	0 010	0 023	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	CD 0900-17	0 002	0 002	<0 00003	0 004	0 004	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	Discharge 2100	0 005	0 011	0 025	0 029	0 044	0 114	<0 001	<0 001	<0 001	<0 001	0 001	0 002
	3/18/98	CD-0900-18	0 003	0 002	<0 00003	0 004	0 004	0 013	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/18/98	Discharge-2100-18	0 003	0 002	<0 00003	0 003	0 007	0 015	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/19/98	CD-0900-19	0 006	0 730	1 700	1 900	4 200	8 536	<0.001	0 010	0 023	0 026	0 057	0 115
	3/19/98	Discharge-2100-19	0 005	0 005	0 004	0 009	0 014	0 037	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/20/98	CD-0900-20	<0 0002	<0 00006	<0 00003	0 001	0 002	0 003	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/21/98	Discharge106-0900-21	0 001	0 010	0 024	0 028	0 062	0 125	<0 001	<0 001	<0 001	<0 001	0 001	0 002
	3/22/98	Discharge106-0900-22	0 002	0 002	<0 00003	0 002	0 003	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/23/98	Discharge106-0900-23	0 003	0 002	<0 00003	0 001	0 003	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/24/98	CD106-1-0900-24	0 002	0 008	0 010	0 022	0 058	0 100	<0 001	<0 001	<0 001	<0 001	0 001	0 001
	3/25/98	CD-0900-25	0 009	0 007	0 008	0 018	0 040	0 082	<0 001	<0 001	<0 001	<0 001	0 001	0 001
	3/26/98	Discharge106-26-0900	0 013	0 001	<0 00003	<0 0001	0 003	0 017	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/27/98	SVE106-Discharge-0900-27	0 002	<0 00006	<0 00003	<0 0001	<0 00008	0 002	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/28/98	SVE106-Discharge-0900-28	0 004	<0 00006	<0 00003	<0 0001	<0 00008	0 004	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/30/98	SVE106-Discharge-0900-29	<0 002	<0 00006	<0 00003	0 002	0 007	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/31/98	JX00852	0 00182	<0 00202	<0 00202	0 006	<0 00345	0 008	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	4/6/98	JAX106EFF	0 00185	<0 00202	<0 00202	4 100	<0 00345	4 102	<0 001	<0 027	<0 027	<0 027	<0 047	0 055
	4/13/98	JAX863	<0 0013	<0 00202	<0 00202	<0 00273	<0 00345	0 000	<0 007	<0 007	<0 007	<0 007	<0 007	<0 001
	4/23/98	JX00878	0 00159	<0 00202	<0 00202	<0 00273	<0 00345	0 002	0 000	<0 007	<0 007	<0 007	<0 007	<0 001
	4/27/98	JX00879	<0 00128	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	<0 007	<0 007	<0 007	<0 007	<0 007	<0 03
	5/4/98	JX00881	0 00252	<0 00202	<0 00202	<0 00273	<0 00345	0 003	<0 001	<0 007	<0 007	<0 007	<0 007	<0 001
	5/11/98	JX00883	<0 0013	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	5/18/98	JX00884	<0 0013	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	<0 001	<0 007	<0 007	<0 007	<0 007	<0 001
	5/27/98	JX00889	0 00398	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	0 000	<0 009	<0 009	<0 009	<0 009	<0 001
	6/4/98	JX00891	0 009	0 003	<0 001	0 009	0 009	0 030	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	6/8/98	JX00893	0 006	<0 001	<0 001	0 002	0 006	< 0016	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	6/17/98	JX00917	0 010	0 003	<0 001	0 004	0 005	<0 023	0 000	0 000	<0 001	0 000	0 000	<0 001
	6/22/98	JX00932	0 050	0 006	<0 001	0 022	0 017	0 095	0 001	0 000	<0 001	0 000	0 000	0 001

ATTACHMENT C
SOIL VAPOR ANALYTICAL LABORATORY REPORTS

Columbia Analytical Services INC.
An Employee-Owned Company

July 02, 1998

Service Request No J9801586

Certification Numbers:

Florida DEP	930298G
Florida HRS.	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A; 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Building 106
Project Name: NAS JAX/BEI

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on June 25. 1998 For your reference, these analyses have been assigned our service request number: J9801586

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

RECEIVED
JUL 14 1998
V. HER...

TK/jg

14765-2

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ 800-695-7222 ▪ Fax 904 739-23

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS JAX/BEI / Building 106
Sample Matrix: Air

Service Request: J9801586
Date Collected: 6/22/98
Date Received: 6/25/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. JX00932
Lab Code: J9801586-001
Test Notes.

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/1/98	85	
Acrolein	NONE	TO-15	10	5	1	NA	7/1/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/1/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/1/98	9	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/1/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/1/98	15	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/1/98	45	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/1/98	51	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/1/98	8	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	12	
Chloroethane	NONE	TO-15	1	1	1	NA	7/1/98	11	
Chloroform	NONE	TO-15	1	1	1	NA	7/1/98	9	
Chloromethane	NONE	TO-15	1	1	1	NA	7/1/98	60	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	7	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	7	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	6	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/1/98	6	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/1/98	6	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/1/98	6	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/1/98	6	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/1/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/1/98	40	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/1/98	10	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/1/98	62	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/1/98	60	
Styrene	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/1/98	17	
Toluene	NONE	TO-15	1	1	1	NA	7/1/98	8	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/1/98	68	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/1/98	6	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/1/98	22	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/1/98	33	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/1/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/1/98	50	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/1/98	39	

Approved By: Tam D. Thrasinger Date: 7/2/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS JAX/BEI / Building 106
Sample Matrix: Air

Service Request: J9801586
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980701-MB
Test Notes:

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/1/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/1/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/1/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/1/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/1/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/1/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/1/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/1/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/1/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/1/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/1/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/1/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/1/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/1/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/1/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/1/98	U	
Toluene	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/1/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/1/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/1/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/1/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/1/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/1/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/1/98	U	

Approved By: Tam D. Hissinger Date 7/2/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc
Project: NAS JAX/BEI / Building 106
Sample Matrix: Air

Service Request: J9801586
Date Collected: 6/22/98
Date Received: 6/25/98
Date Extracted: NA
Date Analyzed: 7/1/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method. NONE
Analysis Method: TO-15

Units: PERCENT
Basis NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX00932	J9801586-001		109	108	97
Lab Control Sample	J980701-LCS		102	102	96
Method Blank	J980701-MB		99	105	92
CAS Acceptance Limits:			50-150	50-150	50-150

Approved By Tom D. Kissinger Date 7/2/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc.
Project: NAS JAX/BEI / Building 106
LCS Matrix: Air

Service Request: J9801586
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 7/1/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J980701-LCS
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	22	110	50-150	
Benzene	NONE	TO-15	16	17	106	50-150	
Trichloroethene	NONE	TO-15	27	28	104	50-150	
Toluene	NONE	TO-15	19	19	100	50-150	
Chlorobenzene	NONE	TO-15	24	21	88	50-150	

Approved By: Tam D. Kissinger Date. 7/2/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801586
Project: NAS JAX/BEI / Building 106
Cooler received on 6/25/98 and opened on 6/25/98 by wrk

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

CHAIN OF CUSTODY RECORD

Page ___ of ___

BECHTEL

Facility Name: Building 101 / NW Sacramento / 101 L
Site Name: Building 101
Delivery Order No.:
Cooler/Crate No.:
Sampling Event:: Weekly Tr 101AC 11-R

SEIR No:
COC Number: 195
Lab:
Field Logbook No.:
Logbook Pg. No.:

Sampled by: Dave Cutshaw (Print) Dave Cutshaw (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
Post GAC	JXC0132	ENV	AIR	6-22-95/1400	01	—	VIA	TO-15	5 Day	VIA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dave Cutshaw	Walter [illegible]	6/25/98	11:22	

COMMENTS/INSTRUCTIONS
PO# 277-00 2608

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper ___

Ship to. ___

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

J9801586

Columbia Analytical Services INC.
An Employee-Owned Company

June 24, 1998

Service Request No. J9801513

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Bldg. 106
Project Name: NAS Jacksonville / BEI

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on June 19, 1998. For your reference, these analyses have been assigned our service request number: J9801513.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jerry Allen
Project Chemist

JA/jg

RECEIVED
JUL 06 1998
V. HERMANN BACLE

3540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ 800-695-7222 ▪ Fax 904 739-2

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / BEI, Bldg. 106
Sample Matrix: Air

Service Request: J9801513
Date Collected: 6/17/98
Date Received: 6/19/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX00917
Lab Code: J9801513-001
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	6/19/98	52	
Acrolein	NONE	TO-15	10	5	1	NA	6/19/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	6/19/98	U	
Benzene	NONE	TO-15	1	1	1	NA	6/19/98	2	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	6/19/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	6/19/98	4	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	6/19/98	13	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	6/19/98	3	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	6/19/98	5	
Chlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	2	
Chloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	6/19/98	4	
Chloromethane	NONE	TO-15	1	1	1	NA	6/19/98	14	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	2	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	2	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	1	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	6/19/98	2	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	6/19/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/19/98	3	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/19/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	6/19/98	11	
Ethylbenzene	NONE	TO-15	1	1	1	NA	6/19/98	2	
Methylene Chloride	NONE	TO-15	10	1	1	NA	6/19/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	6/19/98	U	
Styrene	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	6/19/98	5	
Toluene	NONE	TO-15	1	1	1	NA	6/19/98	2	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	6/19/98	5	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	6/19/98	2	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	6/19/98	4	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	6/19/98	6	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	6/19/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	6/19/98	10	
Total Xylenes	NONE	TO-15	2	2	1	NA	6/19/98	8	

Approved By _____ Date 6/24/98

IS-14 052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville / BEI / Bldg. 106
Sample Matrix: Air

Service Request: J9801513
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. Method Blank
Lab Code J980619-MB
Test Notes

Units. ug/m3
Basis. NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	6/19/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	6/19/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	6/19/98	U	
Benzene	NONE	TO-15	1	1	1	NA	6/19/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	6/19/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	6/19/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	6/19/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	6/19/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	6/19/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	6/19/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/19/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/19/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	6/19/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	6/19/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	6/19/98	U	
Styrene	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	6/19/98	U	
Toluene	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	6/19/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	6/19/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	6/19/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	6/19/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	6/19/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	6/19/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	6/19/98	U	

Approved By: _____ Date. 6/24/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801513
Project:	NAS Jacksonville / BEI / Bldg. 106	**Date Collected:**	6/17/98
Sample Matrix:	Air	**Date Received:**	6/19/98
		Date Extracted:	NA
		Date Analyzed:	6/19/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX00917	J9801513-001		111	107	91
Lab Control Sample	J980619-LCS		105	105	93
Method Blank	J980619-MB		105	107	90
CAS Acceptance Limits.			50-150	50-150	50-150

Approved By _____ Date 6/24/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801513
Project:	NAS Jacksonville / BEI / Bldg. 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	6/19/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. Lab Control Sample — Units: ug/m3

Lab Code. J980619-LCS — Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	18	90	50-150	
Benzene	NONE	TO-15	16	13	81	50-150	
Trichloroethene	NONE	TO-15	27	21	78	50-150	
Toluene	NONE	TO-15	19	15	79	50-150	
Chlorobenzene	NONE	TO-15	24	16	67	50-150	

Approved By: _____ Date: 6/24/98

LCS 52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801513

Project: NAS Jacksonville / BEI / Bldg. 106

Cooler received on 6/19/98 and opened on 6/19/98 by kah

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	22 Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

PAGE ___ OF ___

BECHTEL

Facility Name: NAS Jacksonville / BEI
Site Name: Bldg. 106
Delivery Order No:
Cooler/Crate No:
Sampling Event: Post GAC / Weekly

SEIR No:
COC Number: 188
Lab:
Field Logbook No.:
Logbook Pg. No.:

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (Sign) ___ (Print) ___ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 data reported
- S Screening level analysis; sample results and QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
Post GAC	JX00917	ENV	AIR	6-17-98/1310	-01	—	NA	TO-15	5-Day	NA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	[illegible]	6-18-98	1620	LAB PICKUP

COMMENTS/INSTRUCTIONS: PO 277-CC-2608

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper:
Ship to:

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.

VY RACICO

J980151

14 7 2 5 -

Columbia Analytical Services inc.

An Employee-Owned Company

June 19, 1998

Service Request No. J9801429

Certification Numbers:

Florida DEP:	930298G
Florida HRS.	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Weekly & Monthly Air
Project Name: NAS Jacksonville/BEI BLDG 106

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on June 10, 1998 For your reference, these analyses have been assigned our service request number: J9801429

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jerry Allen
Project Chemist

JA/jg

RECEIVED
JUL 0 6 1998
V. HERMANN BAL

4723 -

3540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ 904 709-2277 ▪ 800-695-7222 ▪ Fax 904 [illegible]

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville/BEI BLDG 106 / Weekly & Monthly Air
Sample Matrix: Air

Service Request: J9801429
Date Collected: 6/8/98
Date Received: 6/10/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name JX00893
Lab Code. J9801429-001
Test Notes

Units. ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	6/11/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	6/11/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	6/11/98	U	
Benzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	6/11/98	2	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	6/11/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	6/11/98	6	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	6/11/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	6/11/98	1	
Chloroform	NONE	TO-15	1	1	1	NA	6/11/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	6/11/98	13	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	1	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	6/11/98	10	
Ethylbenzene	NONE	TO-15	1	1	1	NA	6/11/98	1	
Methylene Chloride	NONE	TO-15	10	1	1	NA	6/11/98	55	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	6/11/98	U	
Styrene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	6/11/98	6	
Toluene	NONE	TO-15	1	1	1	NA	6/11/98	1	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	6/11/98	3	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	6/11/98	2	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	6/11/98	4	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	6/11/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	6/11/98	6	
Total Xylenes	NONE	TO-15	2	2	1	NA	6/11/98	7	

Approved By: Date. 6/19/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville/BEI BLDG 106 / Weekly & Monthly Air
Sample Matrix: Air

Service Request: J9801429
Date Collected: 6/8/98
Date Received: 6/10/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. JX00894
Lab Code: J9801429-002
Test Notes. The MRL is elevated because of matrix interferences Dilution factor 1 10

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	500	10	10	NA	6/11/98	U	
Acrolein	NONE	TO-15	100	5	10	NA	6/11/98	U	
Acrylonitrile	NONE	TO-15	100	4	10	NA	6/11/98	U	
Benzene	NONE	TO-15	10	1	10	NA	6/11/98	10	
Bromodichloromethane	NONE	TO-15	10	1	10	NA	6/11/98	U	
Bromoform	NONE	TO-15	10	1	10	NA	6/11/98	U	
Bromomethane	NONE	TO-15	10	1	10	NA	6/11/98	29	
2-Butanone (MEK)	NONE	TO-15	100	4	10	NA	6/11/98	U	
Carbon Disulfide	NONE	TO-15	10	1	10	NA	6/11/98	100	
Carbon Tetrachloride	NONE	TO-15	10	1	10	NA	6/11/98	22	
Chlorobenzene	NONE	TO-15	10	1	10	NA	6/11/98	15	
Chloroethane	NONE	TO-15	10	1	10	NA	6/11/98	U	
Chloroform	NONE	TO-15	10	1	10	NA	6/11/98	24	
Chloromethane	NONE	TO-15	10	1	10	NA	6/11/98	29	
Dibromochloromethane	NONE	TO-15	10	1	10	NA	6/11/98	U	
1,2-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/11/98	17	
1,3-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/11/98	18	
1,4-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/11/98	14	
1,1-Dichloroethane	NONE	TO-15	10	1	10	NA	6/11/98	16	
1,2-Dichloroethane	NONE	TO-15	10	1	10	NA	6/11/98	16	
1,1-Dichloroethene	NONE	TO-15	10	1	10	NA	6/11/98	19	
cis-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	6/11/98	16	
trans-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	6/11/98	U	
Dichlorodifluoromethane	NONE	TO-15	10	1	10	NA	6/11/98	33	
Ethylbenzene	NONE	TO-15	10	1	10	NA	6/11/98	4600	
Methylene Chloride	NONE	TO-15	100	1	10	NA	6/11/98	140	
4-Methyl-2-pentanone (MIB	NONE	TO-15	100	2	10	NA	6/11/98	U	
Styrene	NONE	TO-15	10	1	10	NA	6/11/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	6/11/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	6/11/98	26	
Tetrachloroethene (PCE)	NONE	TO-15	10	1	10	NA	6/11/98	54	
Toluene	NONE	TO-15	10	1	10	NA	6/11/98	99	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	10	1	10	NA	6/11/98	770	
1,1,2-Trichloroethane	NONE	TO-15	10	1	10	NA	6/11/98	17	
Trichloroethene (TCE)	NONE	TO-15	10	1	10	NA	6/11/98	60	
Trichlorofluoromethane (CF	NONE	TO-15	10	1	10	NA	6/11/98	34	
Vinyl Acetate	NONE	TO-15	100	1	10	NA	6/11/98	U	
Vinyl Chloride	NONE	TO-15	10	1	10	NA	6/11/98	18	
Total Xylenes	NONE	TO-15	20	2	10	NA	6/11/98	16000	

Approved By: Sanya Allen Date. 6/19/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801429
Project:	NAS Jacksonville/BEI BLDG 106 / Weekly & Monthly Air	**Date Collected:**	6/8/98
Sample Matrix:	Air	**Date Received:**	6/10/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name	JX00895	Units	ug/m3
Lab Code	J9801429-003	Basis:	NA
Test Notes	The MRL is elevated because of matrix interferences. Dilution factor:1.10		

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	500	10	10	NA	6/12/98	U	
Acrolein	NONE	TO-15	100	5	10	NA	6/12/98	U	
Acrylonitrile	NONE	TO-15	100	4	10	NA	6/12/98	U	
Benzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
Bromodichloromethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
Bromoform	NONE	TO-15	10	1	10	NA	6/12/98	U	
Bromomethane	NONE	TO-15	10	1	10	NA	6/12/98	30	
2-Butanone (MEK)	NONE	TO-15	100	4	10	NA	6/12/98	U	
Carbon Disulfide	NONE	TO-15	10	1	10	NA	6/12/98	U	
Carbon Tetrachloride	NONE	TO-15	10	1	10	NA	6/12/98	20	
Chlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
Chloroethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
Chloroform	NONE	TO-15	10	1	10	NA	6/12/98	18	
Chloromethane	NONE	TO-15	10	1	10	NA	6/12/98	19	
Dibromochloromethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,2-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,3-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,4-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,1-Dichloroethane	NONE	TO-15	10	1	10	NA	6/12/98	15	
1,2-Dichloroethane	NONE	TO-15	10	1	10	NA	6/12/98	15	
1,1-Dichloroethene	NONE	TO-15	10	1	10	NA	6/12/98	15	
cis-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	6/12/98	78	
trans-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	6/12/98	72	
Dichlorodifluoromethane	NONE	TO-15	10	1	10	NA	6/12/98	31	
Ethylbenzene	NONE	TO-15	10	1	10	NA	6/12/98	68	
Methylene Chloride	NONE	TO-15	100	1	10	NA	6/12/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	100	2	10	NA	6/12/98	U	
Styrene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	10	1	10	NA	6/12/98	250	
Toluene	NONE	TO-15	10	1	10	NA	6/12/98	39	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	10	1	10	NA	6/12/98	41	
1,1,2-Trichloroethane	NONE	TO-15	10	1	10	NA	6/12/98	15	
Trichloroethene (TCE)	NONE	TO-15	10	1	10	NA	6/12/98	180	
Trichlorofluoromethane (CF	NONE	TO-15	10	1	10	NA	6/12/98	27	
Vinyl Acetate	NONE	TO-15	100	1	10	NA	6/12/98	U	
Vinyl Chloride	NONE	TO-15	10	1	10	NA	6/12/98	17	
Total Xylenes	NONE	TO-15	20	2	10	NA	6/12/98	290	

Approved By: _____ Date: 6/19/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville/BEI BLDG 106 / Weekly & Monthly Air
Sample Matrix: Air

Service Request: J9801429
Date Collected: 6/8/98
Date Received: 6/10/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX00896
Lab Code: J9801429-004
Test Notes: The MRL is elevated because of matrix interferences Dilution factor 1 10

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	500	10	10	NA	6/12/98	U	
Acrolein	NONE	TO-15	100	5	10	NA	6/12/98	U	
Acrylonitrile	NONE	TO-15	100	4	10	NA	6/12/98	U	
Benzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
Bromodichloromethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
Bromoform	NONE	TO-15	10	1	10	NA	6/12/98	U	
Bromomethane	NONE	TO-15	10	1	10	NA	6/12/98	26	
2-Butanone (MEK)	NONE	TO-15	100	4	10	NA	6/12/98	U	
Carbon Disulfide	NONE	TO-15	10	1	10	NA	6/12/98	U	
Carbon Tetrachloride	NONE	TO-15	10	1	10	NA	6/12/98	19	
Chlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	15	
Chloroethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
Chloroform	NONE	TO-15	10	1	10	NA	6/12/98	18	
Chloromethane	NONE	TO-15	10	1	10	NA	6/12/98	20	
Dibromochloromethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,2-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,3-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,4-Dichlorobenzene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,1-Dichloroethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,2-Dichloroethane	NONE	TO-15	10	1	10	NA	6/12/98	15	
1,1-Dichloroethene	NONE	TO-15	10	1	10	NA	6/12/98	32	
cis-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	6/12/98	1200	
trans-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	6/12/98	2500	
Dichlorodifluoromethane	NONE	TO-15	10	1	10	NA	6/12/98	30	
Ethylbenzene	NONE	TO-15	10	1	10	NA	6/12/98	82	
Methylene Chloride	NONE	TO-15	100	1	10	NA	6/12/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	100	2	10	NA	6/12/98	U	
Styrene	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	6/12/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	6/12/98	16	
Tetrachloroethene (PCE)	NONE	TO-15	10	1	10	NA	6/12/98	9200	a
Toluene	NONE	TO-15	10	1	10	NA	6/12/98	40	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	10	1	10	NA	6/12/98	160	
1,1,2-Trichloroethane	NONE	TO-15	10	1	10	NA	6/12/98	15	
Trichloroethene (TCE)	NONE	TO-15	10	1	10	NA	6/12/98	2800	
Trichlorofluoromethane (CF	NONE	TO-15	10	1	10	NA	6/12/98	26	
Vinyl Acetate	NONE	TO-15	100	1	10	NA	6/12/98	U	
Vinyl Chloride	NONE	TO-15	10	1	10	NA	6/12/98	23	
Total Xylenes	NONE	TO-15	20	2	10	NA	6/12/98	360	

a Result is from the analysis of a diluted sample, performed on 6/12/98 Dilution factor.1.100

Approved By _____ Date 6/19/98

1S44 052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville BEI BLDG 106 / Weekly & Monthly Air
Sample Matrix: Air

Service Request: J9801429
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980611-MB
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	6/11/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	6/11/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	6/11/98	U	
Benzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	6/11/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	6/11/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	6/11/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	6/11/98	U	
Styrene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	6/11/98	U	
Toluene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	6/11/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	6/11/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	6/11/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	6/11/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	6/11/98	U	

Approved By _____ Date: 6/19/98

IS44 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801429
Project:	NAS Jacksonville BEI BLDG 106 - Weekly & Monthly Air	**Date Collected:**	6/8/98
Sample Matrix:	Air	**Date Received:**	6/10 98
		Date Extracted:	NA
		Date Analyzed:	6/11-12 98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX00893	J9801429-001		110	108	83
JX00894	J9801429-002		111	109	99
JX00895	J9801429-003		117	108	80
JX00896	J9801429-004		119	104	79
Lab Control Sample	J980611-LCS		102	107	92
Method Blank	J980611-MB		101	109	86
CAS Acceptance Limits			50-150	50-150	50-150

Approved By _____ Date 6/19/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801429
Project:	NAS Jacksonville/BEI BLDG 106 / Weekly & Monthly Air	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	6/11/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name	Lab Control Sample	Units	ug/m3
Lab Code:	J980611-LCS	Basis:	NA
Test Notes			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	28	140	50-150	
Benzene	NONE	TO-15	16	21	131	50-150	
Trichloroethene	NONE	TO-15	27	34	126	50-150	
Toluene	NONE	TO-15	19	24	126	50-150	
Chlorobenzene	NONE	TO-15	24	25	104	50-150	

Approved By _____ Date: 6/19/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801429
Project: NAS Jacksonville/BEI BLDG 106 / Weekly & Monthly Air
Cooler received on 6/10/98 and opened on 6/10/98 by kah

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

PAGE ___ OF ___

BECHTEL

Facility Name: NS Jacksonville / BEI
Site Name: Building 106
Delivery Order No:
Cooler/Crate No:
Sampling Event: Weekly & Monthly Air

SEIR No:
COC Number: JX 185
Lab
Field Logbook No.:
Logbook Pg. No.:

Sampled by: Dane Cutshaw (Print) [signature] (Sign) ___ (Print) ___ (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 data reported
- S Screening level analysis; sample results and QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
Post GAC	JX[illegible]	ENV	AIR	[illegible] / 1400	01	—	NH	TO-15	5 Day	NH
Between GAC	JX[illegible]	↓	↓	[illegible] / 1416	01	—	↓	↓	↓	↓
106-2	JX[illegible]	↓	↓	[illegible] / 1425	01	—	↓	↓	↓	↓
106-1	JX[illegible]	↓	↓	[illegible] / 1437	01	—	↓	↓	↓	↓

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	[signature]	[illegible]	0930	6/10/98

COMMENTS/INSTRUCTIONS

P.O. 277 CC - 2605

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper
Ship to

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

J9801429

Y RAC\COCR NUM

Columbia Analytical Services INC.
An Employee-Owned Company

June 12, 1998

Service Request No. J9801409

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A; 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc
P O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Post GAC/Weekly Effluent Air
Project Name. NAS JAX/BEI BLDG 106

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on June 8, 1998. For your reference, these analyses have been assigned our service request number: J9801409.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

TK/jg

RECEIVED
JUL 06 1998
V. HERMANS EAST

14724-1

8540 Baymeadows Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ 800-695-7222 ▪ Fax 904-739-2...

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS JAX BEI BLDG 106 / Post GAC/Weekly Effluent Air
Sample Matrix: Air

Service Request: J9801409
Date Collected: 6/4/98
Date Received: 6/8/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. JX00891
Lab Code. J9801409-001
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	6/11/98	70	
Acrolein	NONE	TO-15	10	5	1	NA	6/11/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	6/11/98	U	
Benzene	NONE	TO-15	1	1	1	NA	6/11/98	2	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	6/11/98	4	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	6/11/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	6/11/98	3	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	6/11/98	5	
Chlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	2	
Chloroethane	NONE	TO-15	1	1	1	NA	6/11/98	4	
Chloroform	NONE	TO-15	1	1	1	NA	6/11/98	6	
Chloromethane	NONE	TO-15	1	1	1	NA	6/11/98	10	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	6/11/98	2	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	2	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	2	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	2	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	2	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	8	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	3	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	6/11/98	13	
Ethylbenzene	NONE	TO-15	1	1	1	NA	6/11/98	3	
Methylene Chloride	NONE	TO-15	10	1	1	NA	6/11/98	14	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	6/11/98	11	
Styrene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	2	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	6/11/98	9	
Toluene	NONE	TO-15	1	1	1	NA	6/11/98	2	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	6/11/98	54	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	2	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	6/11/98	9	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	6/11/98	7	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	6/11/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	6/11/98	9	
Total Xylenes	NONE	TO-15	2	2	1	NA	6/11/98	14	

Approved By Tom D. Kissinger Date 6/12/98

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS JAX/BEI BLDG 106 / Post GAC/Weekly Effluent Air
Sample Matrix: Air

Service Request: J9801409
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980611-MB
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	6/11/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	6/11/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	6/11/98	U	
Benzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	6/11/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	6/11/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	6/11/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	6/11/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	6/11/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	6/11/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	6/11/98	U	
Styrene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	6/11/98	U	
Toluene	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	6/11/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	6/11/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	6/11/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	6/11/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	6/11/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	6/11/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	6/11/98	U	

Approved By Tam D. Hissinger Date 6/12/98

1S44 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801409
Project:	NAS JAX/BEI BLDG 106 / Post GAC/Weekly Effluent Air	**Date Collected:**	6/4/98
Sample Matrix:	Air	**Date Received:**	6/8/98
		Date Extracted:	NA
		Date Analyzed:	6/11/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
JX00891	J9801409-001		104	110	90
Lab Control Sample	J980611-LCS		102	107	92
Method Blank	J980611-MB		101	109	86
CAS Acceptance Limits:			50-150	50-150	50-150

Approved By Tom D. Hissinger Date. 6/12/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc
Project: NAS JAX/BEI BLDG 106 / Post GAC/Weekly Effluent Air
LCS Matrix: Air

Service Request: J9801409
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 6/11/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J980611-LCS
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	28	140	50-150	
Benzene	NONE	TO-15	16	21	131	50-150	
Trichloroethene	NONE	TO-15	27	34	126	50-150	
Toluene	NONE	TO-15	19	24	126	50-150	
Chlorobenzene	NONE	TO-15	24	25	104	50-150	

Approved By: Tom D. Thessing Date: 6/12/98

LCS 52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801409
Project: NAS JAX/BEI BLDG 106 / Post GAC/Weekly Effluent Air
Cooler received on 6/8/98 and opened on 6/8/98 by kah

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

PAGE ___ OF ___

BECHTEL

Facility Name: NS Jacksonville / BEI
Site Name: Building 106
Delivery Order No:
Cooler/Crate No.:
Sampling Event: Post GAC / Weekly Effluent Air

SEIR No:
COC Number: 183
Lab:
Field Logbook No
Logbook Pg No

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (Sign) ___ (Print) ___ (Sign)

Legend — SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 data reported
- S Screening level analysis, sample results and QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
Post GAC Eff.	JXD0891	ENV	AIR	6-4-98/1215	01	—	NA	TO-15	5-Day	N/A

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	[illegible]	6-4-98	1125	6/8/98

COMMENTS/INSTRUCTIONS
PO# ~~22~~ 277-CC-2608

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper
Ship to

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

147221-1

QST ENVIRONMENTAL

CASE NARRATIVE - SDG BEMISCA.5

One air sample was collected on May 27, 1998. The sample was received at QST Environmental on June 2, 1998. The sample was analyzed as requested in the traffic forms. The sample was extracted and analyzed within EPA holding time.

Bechtel - Jacksonville - TO14

Analysis	Lab Batch
VOCs Air (TO14)	G90920

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness except as detailed in this case narrative.

June 30, 1998

QST ENVIRONMENTAL

RECEIVED
JUL 14 1998
V. HERMANK

Virginia C O'Brien / for

Dan Moore
Chemistry Project Manager

PO Box 1703 Gainesville, FL 32602-1703 Phone 352•332•3318 FAX 352•333•6622
A CH2M HILL COMPANY
Formerly Environmental Science & Engineering Inc

14766

Lab Sample Cross Reference and Date Report

Client ID	Lab ID	Method	Collect Date	Receipt Date	Extract Date	HT Days	Analysis Date	HT Days	Batch
JX00889	BEMISCA*19	VOCs Air(TO14)	05/27/98	06/01/98	NA	NA	06/02/98	30(6)	G90920

Actual days in parentheses

G90920

GENERAL COMMENTS.

BATCH NARRATIVE

Batch G90920
Client/Samples Bechtel
Analyst Matthew Booth/3395
Date: 06/01/98

Sample Number	Client ID	Canister Number	Date Collected	Date Analyzed	Intial Pressure
BEMISCA*19	Bldg 106 JX00889	GL160	05/27/98	06/01/98	1.1 "Hg

EXPLANATION OF QC FAILURES.

The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background.

PROBLEM·

RF not within acceptance criteria·

O-XYLENE

EXPLANATION·

RF is within listed acceptance criteria (recovery for all check compounds (+/- 30%, with the recovery for two compounds up to +/- 40%)

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
19 TO14 ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S		JX00889
AMETERS	STORET	BEMISCA
UNITS	METHOD	19
E		05/27/98
TIME		15:00
1,1,1-TRICHLOROETHANE	34506A	<2.78
UG/M3	TO14-G	
1,1,2,2-TETRACHLOROETHANE	34516A	<3 49
UG/M3	TO14-G	
1,1,2-TRICHLOROETHANE	34511A	<2.78
UG/M3	TO14-G	
1,1-DICHLOROETHANE	34496A	<2.06
UG/M3	TO14-G	
1,1-DICHLOROETHYLENE	34501A	<2.02
UG/M3	TO14-G	
1,2,4-TRICHLOROBENZENE	34551A	<3.77
UG/M3	TO14-G	
1,2,4-TRIMETHYLBENZENE	77222A	<2.50
UG/M3	TO14-G	
1,2-DIBROMOETHANE(EDB)	77651A	<3.91
UG/M3	TO14-G	
1,2-DICHLOROBENZENE	34536A	<3.06
UG/M3	TO14-G	
1,2-DICHLOROETHANE	34531A	<2.06
UG/M3	TO14-G	
1,2-DICHLOROPROPANE	34541A	<2.35
UG/M3	TO14-G	
1,3,5-TRIMETHYLBENZENE	77226A	<2.50
UG/M3	TO14-G	
1,3,DICHLOROBENZENE	34566A	<3.06
UG/M3	TO14-G	
BUTADIENE	95023A	<1.13
UG/M3	TO14-G	
-DICHLOROBENZENE	34571A	<3.06
UG/M3	TO14-G	
-DIOXANE	97195A	<18.3
UG/M3	TO14-G	
1-BUTANOL	95755A	<15.4
UG/M3	TO14-G	
1-BUTENE	95866A	2.70
UG/M3	TO14-G	
1-PENTENE	95871A	<1.46
UG/M3	TO14-G	
2,2-DIMETHYLBUTANE	95879A	<1.79
UG/M3	TO14-G	
2,3,4-TRIMETHYLPENTANE	95893A	<2.38
UG/M3	TO14-G	
2,3-DIMETHYLBUTANE	95886A	<1.79
UG/M3	TO14-G	
2,3-DIMETHYLPENTANE	95889A	<2.09
UG/M3	TO14-G	
2-CHLORO-1,3-BUTADIENE	95033A	<1.84
UG/M3	TO14-G	
2-HEXANONE	95756A	<20.8
UG/M3	TO14-G	
2-METHYL HEPTANE	95894A	<2.38
UG/M3	TO14-G	
2-METHYL HEXANE	95888A	<2.09
UG/M3	TO14-G	
2-METHYL PENTANE	95880A	<1.79
UG/M3	TO14-G	
2-METHYL-1-PENTENE	95882A	<1.75
UG/M3	TO14-G	
2-METHYL-2-BUTENE	95875A	<1.46
UG/M3	TO14-G	
ROPROPANE	95770A	<18.5
UG/M3	TO14-G	
LORO-1-PROPENE	95025A	<1.59
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
19 TO14 ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00889
'AMETERS	STORET	BEMISCA
UNITS	METHOD	19
DATE		05/27/98
TIME		15 00
3-METHYL HEPTANE	95895A	<2.38
UG/M3	TO14-G	
3-METHYL HEXANE	95890A	<2.09
UG/M3	TO14-G	
3-METHYL PENTANE	95881A	<1.79
UG/M3	TO14-G	
3-METHYL-1-BUTENE	95869A	<1.46
UG/M3	TO14-G	
4-METHYL-1-PENTENE	95877A	<1.75
UG/M3	TO14-G	
ACETONE	81552A	<12.5
UG/M3	TO14-G	
ACETONITRILE	95758A	<8.55
UG/M3	TO14-G	
ACETOPHENONE	81553A	<25.0
UG/M3	TO14-G	
ACROLEIN	95757A	<11.7
UG/M3	TO14-G	
ACRYLONITRILE	95759A	<11.1
UG/M3	TO14-G	
ALPHA-METHYL-STYRENE	95030A	<2.46
UG/M3	TO14-G	
ALPHA-PINENE	95899A	<2.83
UG/M3	TO14-G	
BENZENE	34030A	<1.63
UG/M3	TO14-G	
ONITRILE	95762A	<21.5
UG/M3	TO14-G	
ZYL LORIDE	97754A	<2.63
UG/M3	TO14-G	
BETA-PINENE	95900A	<2.83
UG/M3	TO14-G	
BROMODICHLOROMETHANE	95026A	<3.41
UG/M3	TO14-G	
BROMOFORM	95031A	<5.3
UG/M3	TO14-G	
BROMOMETHANE	34413A	<1.98
UG/M3	TO14-G	
CARBON DISULFIDE	95772A	<15.9
UG/M3	TO14-G	
CARBON TETRACHLORIDE	32102A	<3.20
UG/M3	TO14-G	
CHLOROBENZENE	34301A	<2.34
UG/M3	TO14-G	
CHLORODIFLUOROMETHANE	95021A	<1.80
UG/M3	TO14-G	
CHLOROETHANE	34311A	<1.34
UG/M3	TO14-G	
CHLOROFORM	32106A	<2.48
UG/M3	TO14-G	
CHLOROMETHANE	34418A	3.55
UG/M3	TO14-G	
CIS-1,2-DICHLOROETHENE	77093A	<2.02
UG/M3	TO14-G	
CIS-1,3-DICHLOROPROPENE	34704A	<2.31
UG/M3	TO14-G	
CIS-2-BUTENE	95868A	<1.17
UG/M3	TO14-G	
CIS-2-HEXENE	95883A	<1.75
UG/M3	TO14-G	
2-PENTENE	95874A	<1.46
UG/M3	TO14-G	
NE	95897A	<2.50
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
19 TO14 ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00889
RAMETERS	STORET	BEMISCA
UNITS	METHOD	19
E		05/27/98
TIME		15:00
CYCLOHEXANE	95887A	<1.75
UG/M3	TO14-G	
CYCLOHEXANONE	77097A	<20 4
UG/M3	TO14-G	
CYCLOPENTANE	95878A	<1.46
UG/M3	TO14-G	
CYCLOPENTENE	95876A	<1.42
UG/M3	TO14-G	
DIBROMOCHLOROMETHANE	95028A	<4.33
UG/M3	TO14-G	
DICHLORODIFLUOROMETHANE	34668A	<2.54
UG/M3	TO14-G	
ETHANOL (ETHYL ALCOHOL)	95753A	<9.60
UG/M3	TO14-G	
ETHER	95763A	<15.4
UG/M3	TO14-G	
ETHYL ACRYLATE	95768A	<20.8
UG/M3	TO14-G	
ETHYL TERT-BUTYL ETHER	95765A	<21.3
UG/M3	TO14-G	
ETHYLBENZENE	34371A	<2.21
UG/M3	TO14-G	
FREON 113	77647A	<3.90
UG/M3	TO14-G	
FREON 114	96776A	<3.56
UG/M3	TO14-G	
ANE	95027A	<2.09
UG/M3	TO14-G	
ACHLOROBUTADIENE	34391A	<5.3
UG/M3	TO14-G	
ANE	95032A	<1.79
UG/M3	TO14-G	
ISOBUTANE	95865A	2.42
UG/M3	TO14-G	
ISOOCTANE	95891A	<2.38
UG/M3	TO14-G	
ISOPENTANE	95870A	<1.50
UG/M3	TO14-G	
ISOPRENE	95872A	<1.42
UG/M3	TO14-G	
ISOPROPYL ALCOHOL	95754A	<12.5
UG/M3	TO14-G	
M,P-XYLENE	97234A	<2.21
UG/M3	TO14-G	
METHACRYLONITRILE	95761A	<14.0
UG/M3	TO14-G	
METHANOL	77885A	<6.65
UG/M3	TO14-G	
METHYL ETHYL KETONE	81595A	<15.0
UG/M3	TO14-G	
METHYL ISOBUT'KETONE	81596A	<20.8
UG/M3	TO14-G	
METHYL METHACRYLATE	95769A	<20.8
UG/M3	TO14-G	
METHYL TERT-BUTYL ETHER	95764A	<18 3
UG/M3	TO14-G	
METHYLCYCLOHEXANE	95892A	<2.04
UG/M3	TO14-G	
METHYLCYCLOPENTANE	95885A	<1.75
UG/M3	TO14-G	
YLENE CHLORIDE	34423A	<1.77
UG/M3	TO14-G	
TANE	95864A	3.82
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
19 TO14.ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00889
AMETERS	STORET	BEMISCA
UNITS	METHOD	19
E		05/27/98
TIME		15:00
N-PROPYLBENZENE	95898A	<2.50
UG/M3	TO14-G	
NITROBENZENE	95771A	<25.6
UG/M3	TO14-G	
NONANE	95896A	<2.67
UG/M3	TO14-G	
O-XYLENE	97235A	<2.21
UG/M3	TO14-G	
OCTANE	95029A	<2.38
UG/M3	TO14-G	
PENTANE	95024A	<1.50
UG/M3	TO14-G	
PROPIONITRILE	95760A	<11.5
UG/M3	TO14-G	
PROPYLENE	95022A	1.73
UG/M3	TO14-G	
STYRENE	77128A	<2.17
UG/M3	TO14-G	
TETRACHLOROETHENE	34475A	<3.45
UG/M3	TO14-G	
TETRAHYDROFURAN	95766A	<15.0
UG/M3	TO14-G	
TOLUENE	34010A	<1.92
UG/M3	TO14-G	
TRANS-1,2-DICHLOROETHENE	95034A	<2.02
UG/M3	TO14-G	
S-1,3-DICHLOROPROPENE	34699A	<2.31
UG/M3	TO14-G	
NS-2-BUTENE	95867A	<1.17
UG/M3	TO14-G	
T S-2-HEXENE	95884A	<1.75
UG/M3	TO14-G	
TRANS-2-PENTENE	95873A	<1.46
UG/M3	TO14-G	
TRICHLOROETHENE	39180A	<2.73
UG/M3	TO14-G	
TRICHLOROFLUOROMETHANE	34488A	<2.86
UG/M3	TO14-G	
VINYL ACETATE	95767A	<17.9
UG/M3	TO14-G	
VINYL CHLORIDE	39175A	3.98
UG/M3	TO14-G	

QST ENVIRONMENTAL

CASE NARRATIVE - SDG BEMAYA.1

Three air samples were collected on May 19, 1998. All samples were received at QST Environmental on May 21, 1998. All samples were analyzed as requested in the traffic forms. All samples were extracted and analyzed within EPA holding time.

Bechtel - Jacksonville - TO14

Analysis	Lab Batch
VOCs Air (TO14)	G90864

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness except as detailed in this case narrative.

June 30, 1998

QST ENVIRONMENTAL

RECEIVED
JUL 14 1998
V. HERMANN CAUER

Virginia C. O'Brien for

Dan Moore
Chemistry Project Manager

PO Box 1703, Gainesville, FL 32602-1703 Phone 352•332•3318 FAX 352•333•6622
A CILCORP COMPANY
Formerly Environmental Science & Engineering, Inc

14766

Lab Sample Cross Reference and Date Report

Client ID	Lab ID	Method	Collect Date	Receipt Date	Extract Date	HT Days	Analysis Date	HT Days	Batch
JX00887	BEMAYA*12	VOCs Air(TO14)	05/19/98	05/21/98	NA	NA	05/31/98	30(12)	G90864
JX00885	BEMAYA*13	VOCs Air(TO14)	05/19/98	05/21/98	NA	NA	05/31/98	30(12)	G90864
JX00886	BEMAYA*14	VOCs Air(TO14)	05/19/98	05/21/98	NA	NA	05/31/98	30(12)	G90864

Actual days in parentheses

G90864

GENERAL COMMENTS.

BATCH NARRATIVE

Batch G90864
Client/Samples. Becntel
Analyst. Matthew Booth/3395
Date: 05/30/98

Sample Number	Client ID	Canister Number	Date Collected	Date Analyzed	Intial Pressure
BEMAYA*12	Bldg 106 Between GAC	GL088	05/19/98	05/30/98	1.7 "Hg
BEMAYA*13	Bldg 106 106-1	GL093	05/19/98	05/30/98	0.4 "Hg
BEMAYA*14	Bldg. 106 106-2	GL119	05/19/98	05/30/98	2.8 "Hg

EXPLANATION OF QC FAILURES:
The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background.

PROBLEM·
RF not within acceptance criteria:
O-XYLENE

EXPLANATION.
RF is within listed acceptance criteria (recovery for all check compounds (+/- 30%, with the recovery for two compounds up to +/- 40%).

PROJECT NUMBER 1298517G 0202 PROJECT NAME NAS MAYPORT-BECHTEL
FIELD GROUP BEMAYA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S		JX00887	JX00885	JX00886
AMETERS	STORET	BEMAYA	BEMAYA	BEMAYA
UNITS	METHOD	12	13	14
		05/19/98	05/19/98	05/19/98
TIME		08:10	08 40	08 30
1,1,1-TRICHLOROETHANE	34506A	<2.78	<2 78	<2.78
UG/M3	TO14-G			
1,1,2,2-TETRACHLOROETHANE	34516A	<3 49	<3 49	<3.49
UG/M3	TO14-G			
1,1,2-TRICHLOROETHANE	34511A	<2.78	<2.78	<2.78
UG/M3	TO14-G			
1,1-DICHLOROETHANE	34496A	<2.06	<2.06	<2.06
UG/M3	TO14-G			
1,1-DICHLOROETHYLENE	34501A	<2.02	5.24	<2.02
UG/M3	TO14-G			
1,2,4-TRICHLOROBENZENE	34551A	<3.77	<3.77	<3.77
UG/M3	TO14-G			
1,2,4-TRIMETHYLBENZENE	77222A	<2.50	<2 50	<2.50
UG/M3	TO14-G			
1,2-DIBROMOETHANE(EDB)	77651A	<3.91	<3 91	<3.91
UG/M3	TO14-G			
1,2-DICHLOROBENZENE	34536A	<3.06	<3.06	<3.06
UG/M3	TO14-G			
1,2-DICHLOROETHANE	34531A	<2.06	<2.06	<2.06
UG/M3	TO14-G			
1,2-DICHLOROPROPANE	34541A	<2.35	<2.35	<2.35
UG/M3	TO14-G			
1,3,5-TRIMETHYLBENZENE	77226A	<2.50	<2.50	<2.50
UG/M3	TO14-G			
1,3,DICHLOROBENZENE	34566A	<3.06	<3.06	<3.06
UG/M3	TO14-G			
BUTADIENE	95023A	<1.13	<1.13	<1.13
UG/M3	TO14-G			
1 -DICHLOROBENZENE	34571A	<3.06	<3.06	<3.06
UG/M3	TO14-G			
1 IOXANE	97195A	<18.3	<18.3	<18.3
UG/M3	TO14-G			
1-BUTANOL	95755A	<15.4	<15.4	<15.4
UC/M3	TO14-G			
1-BUTENE	95866A	3.70	4.87	4.82
UG/M3	TO14-G			
1-PENTENE	95871A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
2,2-DIMETHYLBUTANE	95879A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
2,3,4-TRIMETHYLPENTANE	95893A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
2,3-DIMETHYLBUTANE	95886A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
2,3-DIMETHYLPENTANE	95889A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
2-CHLORO-1,3-BUTADIENE	95033A	<1.84	<1.84	<1.84
UG/M3	TO14-G			
2-HEXANONE	95756A	<20.8	<20.8	<20.8
UG/M3	TO14-G			
2-METHYL HEPTANE	95894A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
2-METHYL HEXANE	95888A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
2-METHYL PENTANE	95880A	<1.79	1.90	<1.79
UG/M3	TO14-G			
2-METHYL-1-PENTENE	95882A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
2-METHYL-2-BUTENE	95875A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
ROPROPANE	95770A	<18.5	<18.5	<18.5
UG/M3	TO14-G			
3 RO-1-PROPENE	95025A	<1.59	<1.59	<1.59
UG/M3	TO14-G			

PROJECT NUMBER 1298517G 0202 PROJECT NAME NAS MAYPORT-BECHTEL
FIELD GROUP BEMAYA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00887	JX00885	JX00886
AMETERS	STORET	BEMAYA	BEMAYA	BEMAYA
UNITS	METHOD	12	13	14
[illegible]		05/19/98	05/19/98	05/19/98
TIME		08:10	08:40	08:30
3-METHYL HEPTANE	95895A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
3-METHYL HEXANE	95890A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
3-METHYL PENTANE	95881A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
3-METHYL-1-BUTENE	95869A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
4-METHYL-1-PENTENE	95877A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
ACETONE	81552A	<12.5	<12.5	<12.5
UG/M3	TO14-G			
ACETONITRILE	95758A	<8 55	<8.55	<8.55
UG/M3	TO14-G			
ACETOPHENONE	81553A	<25.0	<25.0	<25.0
UG/M3	TO14-G			
ACROLEIN	95757A	<11.7	<11.7	<11.7
UG/M3	TO14-G			
ACRYLONITRILE	95759A	<11.1	<11.1	<11.1
UG/M3	TO14-G			
ALPHA-METHYL-STYRENE	95030A	<2.46	<2.46	<2.46
UG/M3	TO14-G			
ALPHA-PINENE	95899A	<2.83	<2.83	<2.83
UG/M3	TO14-G			
BENZENE	34030A	<1.63	2.28	<1.63
UG/M3	TO14-G			
ONITRILE	95762A	<21.5	<21.5	<21.5
UG/M3	TO14-G			
[illegible]ZYL CHLORIDE	97754A	<2.63	<2.63	<2.63
UG/M3	TO14-G			
B[illegible]-PINENE	95900A	<2.83	<2.83	<2.83
UG/M3	TO14-G			
BROMODICHLOROMETHANE	95026A	<3.41	<3.41	<3.41
UG/M3	TO14-G			
BROMOFORM	95031A	<5.3	<5.3	<5.3
UG/M3	TO14-G			
BROMOMETHANE	34413A	<1.98	<1.98	<1.98
UG/M3	TO14-G			
CARBON DISULFIDE	95772A	<15.9	<15.9	<15.9
UG/M3	TO14-G			
CARBON TETRACHLORIDE	32102A	<3.20	<3.20	<3.20
UG/M3	TO14-G			
CHLOROBENZENE	34301A	<2.34	<2.34	<2.34
UG/M3	TO14-G			
CHLORODIFLUOROMETHANE	95021A	2.26	<1.80	<1.80
UG/M3	TO14-G			
CHLOROETHANE	34311A	<1.34	<1.34	<1.34
UG/M3	TO14-G			
CHLOROFORM	32106A	<2.48	2.78	<2.48
UG/M3	TO14-G			
CHLOROMETHANE	34418A	4.75	5.27	5.59
UG/M3	TO14-G			
CIS-1,2-DICHLOROETHENE	77093A	<2.02	2710	13.8
UG/M3	TO14-G			
CIS-1,3-DICHLOROPROPENE	34704A	<2.31	<2.31	<2.31
UG/M3	TO14-G			
CIS-2-BUTENE	95868A	<1.17	<1.17	<1.17
UG/M3	TO14-G			
CIS-2-HEXENE	95883A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
'-PENTENE	95874A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
C[illegible]E	95897A	<2.50	<2.50	<2.50
UG/M3	TO14-G			

PROJECT NUMBER 1298517G 0202 PROJECT NAME NAS MAYPORT-BECHTEL
FIELD GROUP BEMAYA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

'LE ID'S		JX00887	JX00885	JX00886
AMETERS	STORET	BEMAYA	BEMAYA	BEMAYA
UNITS	METHOD	12	13	14
		05/19/98	05/19/98	05/19/98
TIME		08:10	08:40	08:30
CYCLOHEXANE	95887A	<1.75	<1 75	<1 75
UG/M3	TO14-G			
CYCLOHEXANONE	77097A	<20.4	<20 4	<20.4
UG/M3	TO14-G			
CYCLOPENTANE	95878A	<1.46	<1 46	<1 46
UG/M3	TO14-G			
CYCLOPENTENE	95876A	<1.42	<1 42	<1 42
UG/M3	TO14-G			
DIBROMOCHLOROMETHANE	95028A	<4.33	<4 33	<4 33
UG/M3	TO14-G			
DICHLORODIFLUOROMETHANE	34668A	3.09	3.50	3.50
UG/M3	TO14-G			
ETHANOL (ETHYL ALCOHOL)	95753A	<9.60	<9 60	<9 60
UG/M3	TO14-G			
ETHER	95763A	<15.4	<15 4	<15.4
UG/M3	TO14-G			
ETHYL ACRYLATE	95768A	<20.8	<20 8	<20 8
UG/M3	TO14-G			
ETHYL TERT-BUTYL ETHER	95765A	<21.3	<21.3	<21.3
UG/M3	TO14-G			
ETHYLBENZENE	34371A	<2.21	<2.21	<2.21
UG/M3	TO14-G			
FREON 113	77647A	<3.90	5.76	<3.90
UG/M3	TO14-G			
FREON 114	96776A	<3.56	<3.56	<3 56
UG/M3	TO14-G			
ANE	95027A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
H ACHLOROBUTADIENE	34391A	<5.3	<5.3	<5.3
UG/M3	TO14-G			
H NE	95032A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
ISOBUTANE	95865A	1.45	2.27	1.26
UG/M3	TO14-G			
ISOOCTANE	95891A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
ISOPENTANE	95870A	<1.50	10.2	4.77
UG/M3	TO14-G			
ISOPRENE	95872A	<1.42	<1.42	1.47
UG/M3	TO14-G			
ISOPROPYL ALCOHOL	95754A	<12.5	<12.5	<12.5
UG/M3	TO14-G			
M,P-XYLENE	97234A	<2.21	<2.21	2.34
UG/M3	TO14-G			
METHACRYLONITRILE	95761A	<14.0	<14.0	<14.0
UG/M3	TO14-G			
METHANOL	77885A	<6.65	<6.65	<6.65
UG/M3	TO14-G			
METHYL ETHYL KETONE	81595A	207	<15.0	<15.0
UG/M3	TO14-G			
METHYL ISOBUT'KETONE	81596A	<20.8	<20.8	<20.8
UG/M3	TO14-G			
METHYL METHACRYLATE	95769A	<20.8	<20.8	<20.8
UG/M3	TO14-G			
METHYL TERT-BUTYL ETHER	95764A	<18.3	<18.3	<18 3
UG/M3	TO14-G			
METHYLCYCLOHEXANE	95892A	<2.04	<2.04	<2.04
UG/M3	TO14-G			
METHYLCYCLOPENTANE	95885A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
'LENE CHLORIDE	34423A	<1.77	<1.77	<1.77
UG/M3	TO14-G			
N ANE	95864A	<1.21	3.73	3.32
UG/M3	TO14-G			

PROJECT NUMBER 1298517G 0202 PROJECT NAME NAS MAYPORT-BECHTEL
FIELD GROUP BEMAYA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S		JX00887	JX00885	JX00886
F METERS	STORET	BEMAYA	BEMAYA	BEMAYA
UNITS	METHOD	12	13	14
[illegible]		05/19/98	05/19/98	05/19/98
TIME		08:10	08·40	08.30
N-PROPYLBENZENE	95898A	<2.50	<2.50	<2.50
UG/M3	TO14-G			
NITROBENZENE	95771A	<25.6	<25.6	<25.6
UG/M3	TO14-G			
NONANE	95896A	<2.67	<2.67	<2.67
UG/M3	TO14-G			
O-XYLENE	97235A	<2.21	<2.21	<2.21
UG/M3	TO14-G			
OCTANE	95029A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
PENTANE	95024A	<1.50	2.34	1.89
UG/M3	TO14-G			
PROPIONITRILE	95760A	<11.5	<11.5	<11.5
UG/M3	TO14-G			
PROPYLENE	95022A	4.06	4.57	4.45
UG/M3	TO14-G			
STYRENE	77128A	<2.17	<2.17	<2.17
UG/M3	TO14-G			
TETRACHLOROETHENE	34475A	<3.45	30300	27 1
UG/M3	TO14-G			
TETRAHYDROFURAN	95766A	299	<15.0	<15.0
UG/M3	TO14-G			
TOLUENE	34010A	<1.92	2.03	3.56
UG/M3	TO14-G			
TRANS-1,2-DICHLOROETHENE	95034A	<2.02	4720	7.62
UG/M3	TO14-G			
-1,3-DICHLOROPROPENE	34699A	<2.31	<2.31	<2.31
UG/M3	TO14-G			
S-2-BUTENE	95867A	<1.17	<1.17	<1.17
UG/M3	TO14-G			
S-2-HEXENE	95884A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
TRANS-2-PENTENE	95873A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
TRICHLOROETHENE	39180A	<2.73	8410	18.0
UG/M3	TO14-G			
TRICHLOROFLUOROMETHANE	34488A	<2.86	<2.86	<2.86
UG/M3	TO14-G			
[illegible] TATE	95767A	<17 9	<17 9	<17.9
G/M3	TO14-G			
NYL CHLOR DE	39175A	12.4	5.25	<1.30
/M3	TO14-G			

QST ENVIRONMENTAL

CASE NARRATIVE - SDG BEMISCA.3

One air sample was collected on May 18, 1998. The sample was received at QST Environmental on May 21, 1998. The sample was analyzed as requested in the traffic forms. The sample was extracted and analyzed within EPA holding time.

Bechtel - Jacksonville - TO14

Analysis	Lab Batch
VOCs Air (TO14)	G90780

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness except as detailed in this case narrative.

RECEIVED

JUL 14 1998

V. HERN...

June 30, 1998

QST ENVIRONMENTAL

Virginia C. O'Brien / for

Dan Moore
Chemistry Project Manager

P.O. Box 1703 Gainesville FL 32602-1703, Phone 352•332•3318, FAX 352•333•0622
A CH2M HILL COMPANY
Formerly Environmental Science & Engineering Inc

1476 G-4

Lab Sample Cross Reference and Date Report

Client ID	Lab ID	Method	Collect Date	Receipt Date	Extract Date	HT Days	Analysis Date	HT Days	Batch
JX00884	BEMISCA*17	VOCs Air(TO14)	05/18/98	05/21/98	NA	NA	05/21/98	30(3)	G90780

Actual days in parentheses

G90780

GENERAL COMMENTS:

BATCH NARRATIVE

Batch G90780
Client/Samples. Bechtel
Analyst: Matthew Booth/3395
Date· 05/21/98

Sample Number	Client ID	Canister Number	Date Collected	Date Received	Date Analyzed	Intial Pressure
BEMISCA*17	BLDG. 106 JX00881	DL116	05/18/98	05/21/98	05/21/98	2.4 "Hg

EXPLANATION OF QC FAILURES.

The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background.

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S		JX00884
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/18/98
TIME		16:00
1,1,1-TRICHLOROETHANE	34506A	<2.78
UG/M3	TO14-G	
1,1,2,2-TETRACHLOROETHANE	34516A	<3.49
UG/M3	TO14-G	
1,1,2-TRICHLOROETHANE	34511A	<2.78
UG/M3	TO14-G	
1,1-DICHLOROETHANE	34496A	<2.06
UG/M3	TO14-G	
1,1-DICHLOROETHYLENE	34501A	<2.02
UG/M3	TO14-G	
1,2,4-TRICHLOROBENZENE	34551A	<3.77
UG/M3	TO14-G	
1,2,4-TRIMETHYLBENZENE	77222A	<2.50
UG/M3	TO14-G	
1,2-DIBROMOETHANE(EDB)	77651A	<3.91
UG/M3	TO14-G	
1,2-DICHLOROBENZENE	34536A	<3.06
UG/M3	TO14-G	
1,2-DICHLOROETHANE	34531A	<2.06
UG/M3	TO14-G	
1,2-DICHLOROPROPANE	34541A	<2.35
UG/M3	TO14-G	
1,3,5-TRIMETHYLBENZENE	77226A	<2.50
UG/M3	TO14-G	
1,3,DICHLOROBENZENE	34566A	<3.06
UG/M3	TO14-G	
BUTADIENE	95023A	<1.13
UG/M3	TO14-G	
1,4-DICHLOROBENZENE	34571A	<3.06
UG/M3	TO14-G	
1,4-DIOXANE	97195A	<18.3
UG/M3	TO14-G	
1-BUTANOL	95755A	<15.4
UG/M3	TO14-G	
1-BUTENE	95866A	1.61
UG/M3	TO14-G	
1-PENTENE	95871A	<1.46
UG/M3	TO14-G	
2,2-DIMETHYLBUTANE	95879A	<1.79
UG/M3	TO14-G	
2,3,4-TRIMETHYLPENTANE	95893A	<2.38
UG/M3	TO14-G	
2,3-DIMETHYLBUTANE	95886A	<1.79
UG/M3	TO14-G	
2,3-DIMETHYLPENTANE	95889A	<2.09
UG/M3	TO14-G	
2-CHLORO-1,3-BUTADIENE	95033A	<1.84
UG/M3	TO14-G	
2-HEXANONE	95756A	<20.8
UG/M3	TO14-G	
2-METHYL HEPTANE	95894A	<2.38
UG/M3	TO14-G	
2-METHYL HEXANE	95888A	<2.09
UG/M3	TO14-G	
2-METHYL PENTANE	95880A	<1.79
UG/M3	TO14-G	
2-METHYL-1-PENTENE	95882A	<1.75
UG/M3	TO14-G	
2-METHYL-2-BUTENE	95875A	<1.46
UG/M3	TO14-G	
ROPROPANE	95770A	<18.5
UG/M3	TO14-G	
3-CHLORO-1-PROPENE	95025A	<1.59
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

.LE ID'S		JX00884
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/18/98
TIME		16 00
3-METHYL HEPTANE	95895A	<2.38
UG/M3	TO14-G	
3-METHYL HEXANE	95890A	<2.09
UG/M3	TO14-G	
3-METHYL PENTANE	95881A	<1.79
UG/M3	TO14-G	
3-METHYL-1-BUTENE	95869A	<1.46
UG/M3	TO14-G	
4-METHYL-1-PENTENE	95877A	<1.75
UG/M3	TO14-G	
ACETONE	81552A	<12.5
UG/M3	TO14-G	
ACETONITRILE	95758A	<8.55
UG/M3	TO14-G	
ACETOPHENONE	81553A	<25.0
UG/M3	TO14-G	
ACROLEIN	95757A	<11.7
UG/M3	TO14-G	
ACRYLONITRILE	95759A	<11.1
UG/M3	TO14-G	
ALPHA-METHYL-STYRENE	95030A	<2.46
G/M3	TO14-G	
AL[illegible]E	95899A	<2.83
UG/M3	TO14-G	
BENZENE	34030A	<1.63
UG/M3	TO14-G	
ONITRILE	95762A	<21.5
UG/M3	TO14-G	
ZYL CHLORIDE	97754A	<2.63
UG/M3	TO14-G	
BETA-PINENE	95900A	<2.83
UG/M3	TO14-G	
BROMODICHLOROMETHANE	95026A	<3.41
UG/M3	TO14-G	
BROMOFORM	95031A	<5.3
UG/M3	TO14-G	
BROMOMETHANE	34413A	<1.98
UG/M3	TO14-G	
CARBON DISULFIDE	95772A	<15.9
UG/M3	TO14-G	
CARBON TETRACHLORIDE	32102A	<3.20
UG/M3	TO14-G	
CHLOROBENZENE	34301A	<2.34
UG/M3	TO14-G	
CHLORODIFLUOROMETHANE	95021A	<1.80
UG/M3	TO14-G	
CHLOROETHANE	34311A	<1.34
UG/M3	TO14-G	
CHLOROFORM	32106A	<2.48
UG/M3	TO14-G	
CHLOROMETHANE	34418A	5.99
UG/M3	TO14-G	
CIS-1,2-DICHLOROETHENE	77093A	<2.02
UG/M3	TO14-G	
CIS-1,3-DICHLOROPROPENE	34704A	<2.31
UG/M3	TO14-G	
CIS-2-BUTENE	95868A	<1.17
UG/M3	TO14-G	
CIS-2-HEXENE	95883A	<1.75
UG/M3	TO14-G	
-PENTENE	95874A	<1.46
UG/M3	TO14-G	
MENE	95897A	<2.50
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

PARAMETERS	STORET METHOD	JX00884 BEMISCA 17
UNITS		
DATE		05/18/98
TIME		16 00
CYCLOHEXANE	95887A	<1 75
UG/M3	TO14-G	
CYCLOHEXANONE	77097A	<20 4
UG/M3	TO14-G	
CYCLOPENTANE	95878A	<1.46
UG/M3	TO14-G	
CYCLOPENTENE	95876A	<1.42
UG/M3	TO14-G	
DIBROMOCHLOROMETHANE	95028A	<4.33
UG/M3	TO14-G	
DICHLORODIFLUOROMETHANE	34668A	<2.54
UG/M3	TO14-G	
ETHANOL (ETHYL ALCOHOL)	95753A	<9.60
UG/M3	TO14-G	
ETHER	95763A	<15.4
UG/M3	TO14-G	
ETHYL ACRYLATE	95768A	<20.8
UG/M3	TO14-G	
ETHYL TERT-BUTYL ETHER	95765A	<21.3
UG/M3	TO14-G	
ETHYLBENZENE	34371A	<2.21
UG/M3	TO14-G	
FREON 113	77647A	79.5
UG/M3	TO14-G	
FREON 114	96776A	<3.56
UG/M3	TO14-G	
ANE	95027A	<2.09
UG/M3	TO14-G	
ACHLOROBUTADIENE	34391A	<5.3
UG/M3	TO14-G	
HEXANE	95032A	<1.79
UG/M3	TO14-G	
ISOBUTANE	95865A	<1.21
UG/M3	TO14-G	
ISOOCTANE	95891A	<2.38
UG/M3	TO14-G	
ISOPENTANE	95870A	<1.50
UG/M3	TO14-G	
ISOPRENE	95872A	<1.42
UG/M3	TO14-G	
ISOPROPYL ALCOHOL	95754A	<12.5
UG/M3	TO14-G	
M,P-XYLENE	97234A	9.31
UG/M3	TO14-G	
METHACRYLONITRILE	95761A	<14.0
UG/M3	TO14-G	
METHANOL	77885A	11.0
UG/M3	TO14-G	
METHYL ETHYL KETONE	81595A	104
UG/M3	TO14-G	
METHYL ISOBUT'KETONE	81596A	<20 8
UG/M3	TO14-G	
METHYL METHACRYLATE	95769A	<20.8
UG/M3	TO14-G	
METHYL TERT-BUTYL ETHER	95764A	<18 3
UG/M3	TO14-G	
METHYLCYCLOHEXANE	95892A	<2.04
UG/M3	TO14-G	
METHYLCYCLOPENTANE	95885A	<1.75
UG/M3	TO14-G	
YLENE CHLORIDE	34423A	<1.77
UG/M3	TO14-G	
TANE	95864A	<1.21
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00884
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/18/98
TIME		16:00
N-PROPYLBENZENE	95898A	<2.50
UG/M3	TO14-G	
NITROBENZENE	95771A	<25.6
UG/M3	TO14-G	
NONANE	95896A	<2.67
UG/M3	TO14-G	
O-XYLENE	97235A	5.20
UG/M3	TO14-G	
OCTANE	95029A	<2.38
UG/M3	TO14-G	
PENTANE	95024A	<1.50
UG/M3	TO14-G	
PROPIONITRILE	95760A	<11.5
UG/M3	TO14-G	
PROPYLENE	95022A	4.64
UG/M3	TO14-G	
STYRENE	77128A	<2.17
UG/M3	TO14-G	
TETRACHLOROETHENE	34475A	<3.45
UG/M3	TO14-G	
TETRAHYDROFURAN	95766A	194
UG/M3	TO14-G	
TOLUENE	34010A	<1.92
UG/M3	TO14-G	
TRANS-1,2-DICHLOROETHENE	95034A	<2.02
UG/M3	TO14-G	
S-1,3-DICHLOROPROPENE	34699A	<2.31
UG/M3	TO14-G	
RANS-2-BUTENE	95867A	<1.17
UG/M3	TO14-G	
TRANS-2-HEXENE	95884A	<1.75
UG/M3	TO14-G	
TRANS-2-PENTENE	95873A	<1.46
UG/M3	TO14-G	
TRICHLOROETHENE	39180A	<2.73
UG/M3	TO14-G	
TRICHLOROFLUOROMETHANE	34488A	<2.86
UG/M3	TO14-G	
VL TE	95767A	<17.9
G/M3	TO14-G	
CHL IDE	39175A	<1.30
G/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER
TO14.ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00883
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/11/98
TIME		15:30
1,1,1-TRICHLOROETHANE	34506A	<2.78
UG/M3	TO14-G	
1,1,2,2-TETRACHLOROETHANE	34516A	<3.49
UG/M3	TO14-G	
1,1,2-TRICHLOROETHANE	34511A	<2.78
UG/M3	TO14-G	
1,1-DICHLOROETHANE	34496A	<2.06
UG/M3	TO14-G	
1,1-DICHLOROETHYLENE	34501A	<2.02
UG/M3	TO14-G	
1,2,4-TRICHLOROBENZENE	34551A	<3.77
UG/M3	TO14-G	
1,2,4-TRIMETHYLBENZENE	77222A	<2.50
UG/M3	TO14-G	
1,2-DIBROMOETHANE(EDB)	77651A	<3.91
UG/M3	TO14-G	
1,2-DICHLOROBENZENE	34536A	<3.06
UG/M3	TO14-G	
1,2-DICHLOROETHANE	34531A	<2.06
UG/M3	TO14-G	
1,2-DICHLOROPROPANE	34541A	<2.35
UG/M3	TO14-G	
1,3,5-TRIMETHYLBENZENE	77226A	<2.50
UG/M3	TO14-G	
1,3,DICHLOROBENZENE	34566A	<3.06
UG/M3	TO14-G	
1,3-BUTADIENE	95023A	<1.13
UG/M3	TO14-G	
1,4-DICHLOROBENZENE	34571A	<3.06
UG/M3	TO14-G	
1,4-DIOXANE	97195A	<18.3
UG/M3	TO14-G	
1-BUTANOL	95755A	<15.4
UG/M3	TO14-G	
1-BUTENE	95866A	1.61
UG/M3	TO14-G	
1-PENTENE	95871A	<1.46
UG/M3	TO14-G	
2,2-DIMETHYLBUTANE	95879A	<1.79
UG/M3	TO14-G	
2,3,4-TRIMETHYLPENTANE	95893A	<2.38
UG/M3	TO14-G	
2,3-DIMETHYLBUTANE	95886A	<1.79
UG/M3	TO14-G	
2,3-DIMETHYLPENTANE	95889A	<2.09
UG/M3	TO14-G	
2-CHLORO-1,3-BUTADIENE	95033A	<1.84
UG/M3	TO14-G	
2-HEXANONE	95756A	<20.8
UG/M3	TO14-G	
2-METHYL HEPTANE	95894A	<2.38
UG/M3	TO14-G	
2-METHYL HEXANE	95888A	<2.09
UG/M3	TO14-G	
2-METHYL PENTANE	95880A	<1.79
UG/M3	TO14-G	
2-METHYL-1-PENTENE	95882A	<1.75
UG/M3	TO14-G	
2-METHYL-2-BUTENE	95875A	<1.46
UG/M3	TO14-G	
2-NITROPROPANE	95770A	<18.5
UG/M3	TO14-G	
3-CHLORO-1-PROPENE	95025A	<1.59
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER
TO14.ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00883
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/11/98
TIME		15:30
3-METHYL HEPTANE	95895A	<2.38
UG/M3	TO14-G	
3-METHYL HEXANE	95890A	<2.09
UG/M3	TO14-G	
3-METHYL PENTANE	95881A	<1.79
UG/M3	TO14-G	
3-METHYL-1-BUTENE	95869A	<1.46
UG/M3	TO14-G	
4-METHYL-1-PENTENE	95877A	<1.75
UG/M3	TO14-G	
ACETONE	81552A	<12.5
UG/M3	TO14-G	
ACETONITRILE	95758A	<8.55
UG/M3	TO14-G	
ACETOPHENONE	81553A	<25.0
UG/M3	TO14-G	
ACROLEIN	95757A	<11.7
UG/M3	TO14-G	
ACRYLONITRILE	95759A	<11.1
UG/M3	TO14-G	
ALPHA-METHYL-STYRENE	95030A	<2.46
UG/M3	TO14-G	
ALPHA-PINENE	95899A	<2.83
UG/M3	TO14-G	
BENZENE	34030A	<1.63
UG/M3	TO14-G	
BENZONITRILE	95762A	<21.5
UG/M3	TO14-G	
BENZYL CHLORIDE	97754A	<2.63
UG/M3	TO14-G	
BETA-PINENE	95900A	<2.83
UG/M3	TO14-G	
BROMODICHLOROMETHANE	95026A	<3.41
UG/M3	TO14-G	
BROMOFORM	95031A	<5.3
UG/M3	TO14-G	
BROMOMETHANE	34413A	<1.98
UG/M3	TO14-G	
CARBON DISULFIDE	95772A	<15.9
UG/M3	TO14-G	
CARBON TETRACHLORIDE	32102A	<3.20
UG/M3	TO14-G	
CHLOROBENZENE	34301A	<2.34
UG/M3	TO14-G	
CHLORODIFLUOROMETHANE	95021A	<1.80
UG/M3	TO14-G	
CHLOROETHANE	34311A	<1.34
UG/M3	TO14-G	
CHLOROFORM	32106A	<2.48
UG/M3	TO14-G	
CHLOROMETHANE	34418A	5.99
UG/M3	TO14-G	
CIS-1,2-DICHLOROETHENE	77093A	<2.02
UG/M3	TO14-G	
CIS-1,3-DICHLOROPROPENE	34704A	<2.31
UG/M3	TO14-G	
CIS-2-BUTENE	95868A	<1.17
UG/M3	TO14-G	
CIS-2-HEXENE	95883A	<1.75
UG/M3	TO14-G	
CIS-2-PENTENE	95874A	<1.46
UG/M3	TO14-G	
CUMENE	95897A	<2.50
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER
TO14.ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00883
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/11/98
TIME		15:30
CYCLOHEXANE	95887A	<1.75
UG/M3	TO14-G	
CYCLOHEXANONE	77097A	<20.4
UG/M3	TO14-G	
CYCLOPENTANE	95878A	<1.46
UG/M3	TO14-G	
CYCLOPENTENE	95876A	<1.42
UG/M3	TO14-G	
DIBROMOCHLOROMETHANE	95028A	<4.33
UG/M3	TO14-G	
DICHLORODIFLUOROMETHANE	34668A	<2.54
UG/M3	TO14-G	
ETHANOL (ETHYL ALCOHOL)	95753A	<9.60
UG/M3	TO14-G	
ETHER	95763A	<15.4
UG/M3	TO14-G	
ETHYL ACRYLATE	95768A	<20.8
UG/M3	TO14-G	
ETHYL TERT-BUTYL ETHER	95765A	<21.3
UG/M3	TO14-G	
ETHYLBENZENE	34371A	<2.21
UG/M3	TO14-G	
FREON 113	77647A	79.5
UG/M3	TO14-G	
FREON 114	96776A	<3.56
UG/M3	TO14-G	
HEPTANE	95027A	<2.09
UG/M3	TO14-G	
HEXACHLOROBUTADIENE	34391A	<5.3
UG/M3	TO14-G	
HEXANE	95032A	<1.79
UG/M3	TO14-G	
ISOBUTANE	95865A	<1.21
UG/M3	TO14-G	
ISOOCTANE	95891A	<2.38
UG/M3	TO14-G	
ISOPENTANE	95870A	<1.50
UG/M3	TO14-G	
ISOPRENE	95872A	<1.42
UG/M3	TO14-G	
ISOPROPYL ALCOHOL	95754A	<12.5
UG/M3	TO14-G	
M,P-XYLENE	97234A	9.31
UG/M3	TO14-G	
METHACRYLONITRILE	95761A	<14.0
UG/M3	TO14-G	
METHANOL	77885A	11.0
UG/M3	TO14-G	
METHYL ETHYL KETONE	81595A	104
UG/M3	TO14-G	
METHYL ISOBUT'KETONE	81596A	<20.8
UG/M3	TO14-G	
METHYL METHACRYLATE	95769A	<20.8
UG/M3	TO14-G	
METHYL TERT-BUTYL ETHER	95764A	<18.3
UG/M3	TO14-G	
METHYLCYCLOHEXANE	95892A	<2.04
UG/M3	TO14-G	
METHYLCYCLOPENTANE	95885A	<1.75
UG/M3	TO14-G	
METHYLENE CHLORIDE	34423A	<1.77
UG/M3	TO14-G	
N-BUTANE	95864A	<1.21
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER
TO14.ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00883
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	17
DATE		05/11/98
TIME		15:30
N-PROPYLBENZENE	95898A	<2.50
UG/M3	TO14-G	
NITROBENZENE	95771A	<25.6
UG/M3	TO14-G	
NONANE	95896A	<2.67
UG/M3	TO14-G	
O-XYLENE	97235A	5.20
UG/M3	TO14-G	
OCTANE	95029A	<2.38
UG/M3	TO14-G	
PENTANE	95024A	<1.50
UG/M3	TO14-G	
PROPIONITRILE	95760A	<11.5
UG/M3	TO14-G	
PROPYLENE	95022A	4.64
UG/M3	TO14-G	
STYRENE	77128A	<2.17
UG/M3	TO14-G	
TETRACHLOROETHENE	34475A	<3.45
UG/M3	TO14-G	
TETRAHYDROFURAN	95766A	194
UG/M3	TO14-G	
TOLUENE	34010A	<1.92
UG/M3	TO14-G	
TRANS-1,2-DICHLOROETHENE	95034A	<2.02
UG/M3	TO14-G	
TRANS-1,3-DICHLOROPROPENE	34699A	<2.31
UG/M3	TO14-G	
TRANS-2-BUTENE	95867A	<1.17
UG/M3	TO14-G	
TRANS-2-HEXENE	95884A	<1.75
UG/M3	TO14-G	
TRANS-2-PENTENE	95873A	<1.46
UG/M3	TO14-G	
TRICHLOROETHENE	39180A	<2.73
UG/M3	TO14-G	
TRICHLOROFLUOROMETHANE	34488A	<2.86
UG/M3	TO14-G	
VINYL ACETATE	95767A	<17.9
UG/M3	TO14-G	
VINYL CHLORIDE	39175A	<1.30
UG/M3	TO14-G	

QST ENVIRONMENTAL

CASE NARRATIVE - SDG BEMISCA.2

One air sample was collected on May 4, 1998. The sample was received at QST Environmental on May 7, 1998. The sample was analyzed as requested in the traffic forms. The sample was extracted and analyzed within EPA holding time.

Bechtel - Jacksonville - TO14

Analysis	Lab Batch
VOCs Air (TO14)	G90456

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness except as detailed in this case narrative.

June 1, 1998

QST ENVIRONMENTAL

RECEIVED
JUL 0 6 1998
V. HERMANN BAUER

Hugh S. Prentice

Hugh S. Prentice
Chemistry Project Manager

PO Box 1703 Gainesville, FL 32602-1703, Phone 352•332•3318 FAX 352•333•0622
A CILCORP COMPANY
Formerly Environmental Science & Engineering Inc

Lab Sample Cross Reference and Date Report

Client ID	Lab ID	Method	Collect Date	Receipt Date	Extract Date	HT Days	Analysis Date	HT Days	Batch
JX00881	BEMISCA*16	VOCs Air(TO14)	05/04/98	05/07/98	NA	NA	05/12/98	30(8)	G90456

Actual days in parentheses

G90456

GENERAL COMMENTS

BATCH NARRATIVE

Batch G90456
Client/Samples Bechtel
Analyst Matthew Booth/3395
Date 05/12/98

Sample Number	Client ID	Canister Number	Date Collected	Date Received	Date Analyzed	Intial Pressure
BEMISCA*16	BLDG 106 JX00881	DL898	05/04/98	05/07/98	05/12/98	1.0 "Hg

EXPLANATION OF QC FAILURES

The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background The %RSD in the initial calibration is greater than 40% for 1,2,4-Trichlorobenzene due to canister effects

PROJECT NUMBER .2988170 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID		JX00881
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	16
DATE		05/04/98
TIME		15 00
1,1,1-TRICHLOROETHANE	34506A	<2 78
UG/M3	TO14-G	
1,1,2,2-TETRACHLOROETHANE	34516A	<3 49
UG/M3	TO14-G	
1,1,2-TRICHLOROETHANE	34511A	<2 78
UG/M3	TO14-G	
1,1-DICHLOROETHANE	34496A	<2 06
UG/M3	TO14-G	
1,1-DICHLOROETHYLENE	34501A	<2 02
UG/M3	TO14-G	
1,2,4-TRICHLOROBENZENE	34551A	<3 77
UG/M3	TO14-G	
1,2,4-TRIMETHYLBENZENE	77222A	<2 50
UG/M3	TO14-G	
1,2-DIBROMOETHANE EDB	77651A	<3 91
UG/M3	TO14-G	
1,2-DICHLOROBENZENE	34536A	<3 06
UG/M3	TO14-G	
1,2-DICHLOROETHANE	34531A	<2 06
UG/M3	TO14-G	
1,2-DICHLOROPROPANE	34541A	<2 35
UG/M3	TO14-G	
1,3,5-TRIMETHYLBENZENE	77226A	<2 50
UG/M3	TO14-G	
1,3,DICHLOROBENZENE	34566A	<3 06
UG/M3	TO14-G	
1,3-BUTADIENE	95023A	<1 13
UG/M3	TO14-G	
1,4-DICHLOROBENZENE	34571A	<3 06
UG/M3	TO14-G	
1,4-DIOXANE	97195A	<18 3
UG/M3	TO14-G	
1-BUTANOL	95755A	<15 4
UG/M3	TO14-G	
1-BUTENE	95866A	2.14
UG/M3	TO14-G	
1-PENTENE	95871A	<1 46
UG/M3	TO14-G	
2,2-DIMETHYLBUTANE	95879A	<1 79
UG/M3	TO14-G	
2,3,4-TRIMETHYLPENTANE	95893A	<2 38
UG/M3	TO14-G	
2,3-DIMETHYLBUTANE	95886A	<1.79
UG/M3	TO14-G	
2,3-DIMETHYLPENTANE	95889A	<2 09
UG/M3	TO14-G	
2-CHLORO-1,3-BUTADIENE	95033A	<1 84
UG/M3	TO14-G	
2-HEXANONE	95756A	<20 8
UG/M3	TO14-G	
2-METHYL HEPTANE	95894A	<2 38
UG/M3	TO14-G	
2-METHYL HEXANE	95888A	<2.09
UG/M3	TO14-G	
2-METHYL PENTANE	95880A	<1 79
UG/M3	TO14-G	
2-METHYL-1-PENTENE	95882A	<1 75
UG/M3	TO14-G	
2-METHYL-2-BUTENE	95875A	<1.46
UG/M3	TO14-G	
2-NITROPROPANE	95770A	<18 5
UG/M3	TO14-G	
3-CHLORO-1-PROPENE	95025A	<1 59
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00881
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	16
E		05/04/98
TIME		15 00
3-METHYL -EPTANE	95895A	<2 38
UG/M3	TO14-G	
3-METHYL -EXANE	95890A	<2 09
UG/M3	TO14-G	
3-METHYL PENTANE	95881A	<1 79
UG/M3	TO14-G	
3-METHYL-1-BUTENE	95869A	<1 46
UG/M3	TO14-G	
4-METHYL-1-PENTENE	95877A	<1.75
UG/M3	TO14-G	
ACETONE	81552A	<12 5
UG/M3	TO14-G	
ACETONITRILE	95758A	<8 55
UG/M3	TO14-G	
ACETOPHENONE	81553A	<25 0
UG/M3	TO14-G	
ACROLEIN	95757A	<11 7
UG/M3	TO14-G	
ACRYLONITRILE	95759A	<11 1
UG/M3	TO14-G	
ALPHA-METHYL-STYRENE	95030A	<2.46
UG/M3	TO14-G	
ALPHA-PINENE	95899A	<2.83
UG/M3	TO14-G	
BENZENE	34030A	<1.63
UG/M3	TO14-G	
BENZONITRILE	95762A	<21 5
UG/M3	TO14-G	
BENZYL CHLORIDE	97754A	<2 63
UG/M3	TO14-G	
BETA-PINENE	95900A	<2 83
UG/M3	TO14-G	
BROMODICHLOROMETHANE	95026A	<3 41
UG/M3	TO14-G	
BROMOFORM	95031A	<5.3
UG/M3	TO14-G	
BROMOMETHANE	34413A	<1 98
UG/M3	TO14-G	
CARBON DISULFIDE	95772A	<15.9
UG/M3	TO14-G	
CARBON TETRACHLORIDE	32102A	<3 20
UG/M3	TO14-G	
CHLOROBENZENE	34301A	<2.34
UG/M3	TO14-G	
CHLORODIFLUOROMETHANE	95021A	<1 80
UG/M3	TO14-G	
CHLOROETHANE	34311A	<1.34
UG/M3	TO14-G	
CHLOROFORM	32106A	<2.48
UG/M3	TO14-G	
CHLOROMETHANE	34418A	5.75
UG/M3	TO14-G	
CIS-1,2-DICHLOROETHENE	77093A	<2.02
UG/M3	TO14-G	
CIS-1,3-DICHLOROPROPENE	34704A	<2.31
UG/M3	TO14-G	
CIS-2-BUTENE	95868A	<1.17
UG/M3	TO14-G	
CIS-2-HEXENE	95883A	<1.75
UG/M3	TO14-G	
-2-PENTENE	95874A	<1 46
UG/M3	TO14-G	
[illegible]NE	95897A	<2.50
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JY00881
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	16
DATE		03/04/98
TIME		15 00
CYCLOHEXANE	95887A	<1 75
UG/M3	TO14-G	
CYCLOHEXANONE	77097A	<20 4
UG/M3	TO14-G	
CYCLOPENTANE	95876A	<1 46
UG/M3	TO14-G	
CYCLOPENTENE	95876A	<1 42
UG/M3	TO14-G	
DIBROMOCHLOROMETHANE	95028A	<4 33
UG/M3	TO14-G	
DICHLORODIFLUOROMETHANE	34668A	4 46
UG/M3	TO14-G	
ETHANOL ETHYL ALCOHOL	95753A	<9 60
UG/M3	TO14-G	
ETHER	95763A	<15 4
UG/M3	TO14-G	
ETHYL ACRYLATE	95768A	<20 8
UG/M3	TO14-G	
ETHYL TERT-BUTYL ETHER	95765A	<21 3
UG/M3	TO14-G	
ETHYLBENZENE	34371A	<2 21
UG/M3	TO14-G	
FREON 113	77647A	<3 90
UG/M3	TO14-G	
FREON 114	96776A	<3 56
UG/M3	TO14-G	
HEPTANE	95027A	<2 09
UG/M3	TO14-G	
HEXACHLOROBUTADIENE	34391A	<5 3
UG/M3	TO14-G	
HEXANE	95032A	<1 79
UG/M3	TO14-G	
ISOBUTANE	95865A	2 88
UG/M3	TO14-G	
ISOOCTANE	95891A	<2.38
UG/M3	TO14-G	
ISOPENTANE	95870A	<1 50
UG/M3	TO14-G	
ISOPRENE	95872A	<1.42
UG/M3	TO14-G	
ISOPROPYL ALCOHOL	95754A	<12 5
UG/M3	TO14-G	
M,P-XYLENE	97234A	<2 21
UG/M3	TO14-G	
METHACRYLONITRILE	95761A	<14 0
UG/M3	TO14-G	
METHANOL	77885A	<6 65
UG/M3	TO14-G	
METHYL ETHYL KETONE	81595A	<15 0
UG/M3	TO14-G	
METHYL ISOBUTYL KETONE	81596A	<20 8
UG/M3	TO14-G	
METHYL METHACRYLATE	95769A	<20 8
UG/M3	TO14-G	
METHYL TERT-BUTYL ETHER	95764A	<18 3
UG/M3	TO14-G	
METHYLCYCLOHEXANE	95892A	<2 04
UG/M3	TO14-G	
METHYLCYCLOPENTANE	95885A	<1 75
UG/M3	TO14-G	
METHYLENE CHLORIDE	34423A	<1 77
UG/M3	TO14-G	
NBUTANE	95864A	2 69
UG/M3	TO14-G	

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S		JX00881
PARAMETERS	STORET	BEMISCA
UNITS	METHOD	16
E		05/04/98
TIME		15 00
N-PROPYLBENZENE	95899A	<2 50
UG/M3	TO14-G	
NITROBENZENE	95771A	<25 6
UG/M3	TO14-G	
NONANE	95836A	<2 67
UG/M3	TO14-G	
O-XYLENE	97235A	<2 21
UG/M3	TO14-G	
OCTANE	95029A	<2.38
UG/M3	TO14-G	
PENTANE	95024A	<1 50
UG/M3	TO14-G	
PROPIONITRILE	95760A	<11 5
UG/M3	TO14-G	
PROPYLENE	95022A	2.24
UG/M3	TO14-G	
STYRENE	77128A	<2.17
UG/M3	TO14-G	
TETRACHLOROETHENE	34475A	<3 45
UG/M3	TO14-G	
TETRAHYDROFURAN	95766A	<15.0
UG/M3	TO14-G	
TOLUENE	34010A	<1.92
UG/M3	TO14-G	
TRANS-1,2-DICHLOROETHENE	95034A	<2.02
UG/M3	TO14-G	
NS-1,3-DICHLOROPROPENE	34699A	<2.31
UG/M3	TO14-G	
TRANS-2-BUTENE	95867A	<1.17
UG/M3	TO14-G	
S-2-HEXENE	95884A	<1.75
UG/M3	TO14-G	
TRANS-2-PENTENE	95873A	<1.46
UG/M3	TO14-G	
TRICHLOROETHENE	39180A	<2.73
UG/M3	TO14-G	
TRICHLOROFLUOROMETHANE	34488A	<2.86
UG/M3	TO14-G	
TATE	95767A	<17 9
G/M3	TO14-G	
VINYL CHL IDE	39175A	2.52
G/M3	TO14-G	

QST ENVIRONMENTAL

CASE NARRATIVE - SDG BEMISCA.1

Five air samples were collected on April 23 and 27, 1998. All samples were received at QST Environmental on April 29, 1998. All samples were analyzed as requested in the traffic forms. All samples were extracted and analyzed within EPA holding time.

Bechtel - Jacksonville - TO14

Analysis	Lab Batch
VOCs Air (TO14)	G90419

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness except as detailed in this case narrative.

June 1, 1998

QST ENVIRONMENTAL

Hugh S. Prentice

Hugh S. Prentice
Chemistry Project Manager

RECEIVED
JUL 0 6 1998
V. HERMANN BAUER

P.O. Box 1703 Gainesville FL 32602-1703, Phone 352•332•3318, FAX 352•333•6622
A CH2M HILL COMPANY
Formerly Environmental Science & Engineering, Inc.

Lab Sample Cross Reference and Date Report

Client ID	Lab ID	Method	Collect Date	Receipt Date	Extract Date	HT Days	Analysis Date	HT Days	Batch
JX00875	BEMISCA*11	VOCs Air(TO14)	04/23/98	04/29/98	NA	NA	05/04/98	30(11)	G90419
JX00876	BEMISCA*12	VOCs Air(TO14)	04/23/98	04/29/98	NA	NA	05/04/98	30(11)	G90419
JX00877	BEMISCA*13	VOCs Air(TO14)	04/23/98	04/29/98	NA	NA	05/04/98	30(11)	G90419
JX00878	BEMISCA*14	VOCs Air(TO14)	04/23/98	04/29/98	NA	NA	05/04/98	30(11)	G90419
JX00879	BEMISCA*15	VOCs Air(TO14)	04/27/98	04/29/98	NA	NA	05/04/98	30(7)	G90419

Actual days in parentheses

G90419

GENERAL COMMENTS

BATCH NARRATIVE

Batch G90419
Client/Samples Bechtel
Analyst Matthew Booth/3395
Date 05/03/98

Sample Number	Client ID	Canister Number	Date Collected	Date Received	Date Analyzed	Intial Pressure
BEMISCA*11	INFLUENT SVE106-1	2562	04/23/98	04/30/98	05/03/98	2.4 "Hg
BEMISCA*12	INFLUENT SVE106-2	DL115	04/23/98	04/30/98	05/03/98	1.3 "Hg
BEMISCA*13	BETWEEN CARBON	GL143	04/23/98	04/30/98	05/03/98	0.8 "Hg
BEMISCA*14	BLDG 106 EFFLUENT	GL155	04/23/98	04/30/98	05/03/98	1.1 "Hg
BEMISCA*15	BLDG 106 CARBON	GL075	04/27/98	04/30/98	05/03/98	1.6 "Hg

EXPLANATION OF QC FAILURES

The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background.

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00875	JX00876	JX00877	JX00878	JX00879
PARAMETERS	STORET	BEMISCA	BEMISCA	BEMISCA	BEMISCA	BEMISCA
UNITS	METHOD	11	12	13	14	15
DATE		04/23/98	04/23/98	04/23/98	04/23/98	04/27/98
TIME		14 30	14 45	15 00	15 30	14 30
1,1,1-TRICHLOROETHANE	34506A	<2 78	<2 78	<2 78	<2 78	<2 78
UG/M3	TO14-G					
1,1,2,2-TETRACHLOROETHANE	34516A	<3 49	<3 49	<3 49	<3 49	<3 49
UG/M3	TO14-G					
1,1,2-TRICHLOROETHANE	34511A	<2 78	<2 78	<2 78	<2 78	<2 78
UG/M3	TO14-G					
1,1-DICHLOROETHANE	34496A	<2 06	<2 06	<2 06	<2 06	<2 06
UG/M3	TO14-G					
1,1-DICHLOROETHYLENE	34501A	2.58	<2 02	<2 02	<2 02	<2 02
UG/M3	TO14-G					
1,2,4-TRICHLOROBENZENE	34551A	<3 77	<3 77	<3 77	<3 77	<3 77
UG/M3	TO14-G					
1,2,4-TRIMETHYLBENZENE	77222A	<2 50	<2 50	<2 50	<2 50	<2 50
UG/M3	TO14-G					
1,2-DIBROMOETHANE(EDB)	77651A	<3 91	<3 91	<3 91	<3 91	<3 91
UG/M3	TO14-G					
1,2-DICHLOROBENZENE	34536A	<3.06	<3 06	<3 06	<3 06	<3 06
UG/M3	TO14-G					
1,2-DICHLOROETHANE	34531A	<2.06	<2 06	<2 06	<2 06	<2 06
UG/M3	TO14-G					
1,2-DICHLOROPROPANE	34541A	<2 35	<2 35	<2 35	<2 35	<2 35
UG/M3	TO14-G					
1,3,5-TRIMETHYLBENZENE	77226A	<2 50	<2 50	<2 50	<2 50	<2 50
UG/M3	TO14-G					
1,3,DICHLOROBENZENE	34566A	<3.06	<3 06	<3 06	<3 06	<3 06
UG/M3	TO14-G					
-BUTADIENE	95023A	<1 13	<1 13	<1 13	<1 13	<1.13
UG/M3	TO14-G					
1,4-DICHLOROBENZENE	34571A	<3 06	<3 06	<3 06	<3 06	<3 06
UG/M3	TO14-G					
1,4-DIOXANE	97195A	<18.3	<18 3	<18 3	<18.3	<18 3
UG/M3	TO14-G					
1-BUTANOL	95755A	<15 4	<15 4	<15 4	<15 4	<15 4
UG/M3	TO14-G					
1-BUTENE	95866A	2.70	2.42	<1 17	<1.17	<1 17
UG/M3	TO14-G					
1-PENTENE	95871A	<1 46	<1 46	<1 46	<1 46	<1 46
UG/M3	TO14-G					
2,2-DIMETHYLBUTANE	95879A	<1 79	<1 79	<1 79	<1 79	<1 79
UG/M3	TO14-G					
2,3,4-TRIMETHYLPENTANE	95893A	<2 38	<2 38	<2 38	<2 38	<2 38
UG/M3	TO14-G					
2,3-DIMETHYLBUTANE	95886A	<1.79	<1 79	<1 79	<1 79	<1 79
UG/M3	TO14-G					
2,3-DIMETHYLPENTANE	95889A	<2 09	<2 09	<2.09	<2 09	<2 09
UG/M3	TO14-G					
2-CHLORO-1,3-BUTADIENE	95033A	<1.84	<1.84	<1 84	<1.84	<1 84
UG/M3	TO14-G					
2-HEXANONE	95756A	<20 8	<20 8	<20 8	<20 8	<20 8
UG/M3	TO14-G					
2-METHYL HEPTANE	95894A	<2 38	<2 38	<2 38	<2 38	<2 38
UG/M3	TO14-G					
2-METHYL HEXANE	95888A	<2 09	<2 09	<2.09	<2 09	<2 09
UG/M3	TO14-G					
2-METHYL PENTANE	95880A	<1 79	<1 79	<1 79	<1 79	<1 79
UG/M3	TO14-G					
2-METHYL-1-PENTENE	95882A	<1 75	<1 75	<1 75	<1 75	<1 75
UG/M3	TO14-G					
2-METHYL-2-BUTENE	95875A	<1 46	<1.46	<1 46	<1 46	<1 46
UG/M3	TO14-G					
ITROPROPANE	95770A	<18 5	<18 5	<18 5	<18 5	<18 5
UG/M3	TO14-G					
LORO-1-PROPENE	95025A	<1 59	<1 59	<1 59	<1 59	<1 59
UG/M3	TO14-G					

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00875	JX00876	JX00877	JX00878	JX00879
PARAMETERS	STORET	BEMISCA	BEMISCA	BEMISCA	BEMISCA	BEMISCA
UNITS	METHOD	11	12	13	14	15
DATE		04/23/98	04/23/98	04/23/98	04/23/98	04/27/98
TIME		14 30	14 45	15 00	15.30	14 30
3-METHYL HEPTANE	95895A	<2.38	<2 38	<2 38	<2.38	<2 38
UG/M3	TO14-G					
3-METHYL HEXANE	95890A	<2.09	<2 09	<2 09	<2.09	<2.09
UG/M3	TO14-G					
3-METHYL PENTANE	95881A	<1 79	<1 79	<1.79	<1 79	<1.79
UG/M3	TO14-G					
3-METHYL-1-BUTENE	95869A	<1 46	<1 46	<1 46	<1.46	<1 46
UG/M3	TO14-G					
4-METHYL 1-PENTENE	95877A	<1 75	<1 75	<1 75	<1.75	<1.75
UG/M3	TO14-G					
ACETONE	81552A	<12 5	<12 5	<12 5	<12 5	<12.5
UG/M3	TO14-G					
ACETONITRILE	95758A	<8 55	<8 55	<8 55	<8 55	<8 55
UG/M3	TO14-G					
ACETOPHENONE	81553A	<25 0	<25 0	<25 0	<25 0	<25 0
UG/M3	TO14-G					
ACROLEIN	95757A	<11 7	<11 7	<11 7	<11 7	<11 7
UG/M3	TO14-G					
ACRYLONITRILE	95759A	<11.1	<11 1	<11.1	<11 1	<11 1
UG/M3	TO14-G					
ALPHA-METHYL-STYRENE	95030A	<2.46	<2 46	<2 46	<2.46	<2.46
UG/M3	TO14-G					
ALPHA-PINENE	95899A	<2.83	<2 83	<2 83	<2 83	<2.83
UG/M3	TO14-G					
BENZENE	34030A	2 18	<1 63	<1 63	<1 63	<1 63
UG/M3	TO14-G					
BENZONITRILE	95762A	<21.5	<21.5	<21.5	<21.5	<21 5
UG/M3	TO14-G					
BENZYL CHLORIDE	97754A	<2.63	<2.63	<2.63	<2.63	<2 63
UG/M3	TO14-G					
BETA-PINENE	95900A	<2.83	<2.83	<2.83	<2 83	<2.83
UG/M3	TO14-G					
BROMODICHLOROMETHANE	95026A	<3.41	<3.41	<3.41	<3 41	<3 41
UG/M3	TO14-G					
BROMOFORM	95031A	<5 3	<5.3	<5.3	<5 3	<5 3
UG/M3	TO14-G					
BROMOMETHANE	34413A	<1 98	<1.98	<1.98	<1.98	<1 98
UG/M3	TO14-G					
CARBON DISULFIDE	95772A	<15 9	<15.9	<15 9	<15.9	<15.9
UG/M3	TO14-G					
CARBON TETRACHLORIDE	32102A	<3 20	<3 20	<3 20	<3 20	<3 20
UG/M3	TO14-G					
CHLOROBENZENE	34301A	<2.34	<2 34	<2.34	<2 34	<2.34
UG/M3	TO14-G					
CHLORODIFLUOROMETHANE	95021A	<1 80	<1 80	<1 80	<1 80	<1.80
UG/M3	TO14-G					
CHLOROETHANE	34311A	<1.34	<1.34	<1.34	<1.34	<1 34
UG/M3	TO14-G					
CHLOROFORM	32106A	<2.48	<2.48	<2.48	<2 48	<2.48
UG/M3	TO14-G					
CHLOROMETHANE	34418A	4.96	4 98	4 56	5 31	4 94
UG/M3	TO14-G					
CIS-1,2-DICHLOROETHENE	77093A	221	<2 02	<2.02	<2.02	<2 02
UG/M3	TO14-G					
CIS-1,3-DICHLOROPROPENE	34704A	<2.31	<2 31	<2 31	<2.31	<2.31
UG/M3	TO14-G					
CIS-2-BUTENE	95868A	<1.17	<1 17	<1.17	<1.17	<1.17
UG/M3	TO14-G					
CIS-2-HEXENE	95883A	<1.75	<1.75	<1.75	<1.75	<1 75
UG/M3	TO14-G					
CIS-2-PENTENE	95874A	<1 46	<1 46	<1.46	<1.46	<1.46
UG/M3	TO14-G					
CYCLOHEXANE	95897A	7 20	<2 50	<2.50	<2 50	<2 50
UG/M3	TO14-G					

PROJECT NUMBER .298517G 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00875	JX00876	JX00877	JX00878	JX00879
PARAMETERS	STORET	BEMISCA	BEMISCA	BEMISCA	BEMISCA	BEMISCA
UNITS	METHOD	11	12	13	14	15
DATE		04/23/98	04/23/98	04/23/98	04/23/98	04/27/98
TIME		14 30	14 45	15:00	15 30	14 30
CYCLOHEXANE	95887A	<1 75	<1 75	<1 75	<1 75	<1.75
UG/M3	TO14-G					
CYCLOHEXANONE	77197A	<20 4	<20 4	<20 4	<20 4	<20 4
UG/M3	TO14-G					
CYCLOPENTANE	95876A	<1 46	<1 46	<1 46	<1 46	<1 46
UG/M3	TO14-G					
CYCLOPENTENE	95876A	<1.42	<1 42	<1 42	<1 42	<1 42
UG/M3	TO14-G					
DIBROMOCHLOROMETHANE	95028A	<4 33	<4 33	<4 33	<4 33	<4 33
UG/M3	TO14-G					
DICHLORODIFLUOROMETHANE	34668A	2.74	<2 54	<2 54	<2 54	<2 54
UG/M3	TO14-G					
ETHANOL ETHYL ALCOHOL)	95753A	<9 60	<9 60	<9 60	<9 60	<9 60
UG/M3	TO14-G					
ETHER	95763A	<15 4	<15 4	<15 4	<15 4	<15 4
UG/M3	TO14-G					
ETHYL ACRYLATE	95768A	<20 8	<20 8	<20 8	<20 8	<20 8
UG/M3	TO14-G					
ETHYL TERT-BUTYL ETHER	95765A	<21 3	<21 3	<21 3	<21 3	<21 3
UG/M3	TO14-G					
ETHYLBENZENE	34371A	<2 21	<2 21	<2 21	<2 21	<2 21
UG/M3	TO14-G					
FREON 113	77647A	3 90	<3 90	<3 90	<3 90	<3 90
UG/M3	TO14-G					
FREON 114	96776A	<3 56	<3 56	<3 56	<3 56	<3 56
UG/M3	TO14-G					
HEPTANE	95027A	<2 09	<2 09	<2 09	<2 09	<2 09
UG/M3	TO14-G					
HEXACHLOROBUTADIENE	34391A	<5 3	<5 3	<5 3	<5 3	<5 3
UG/M3	TO14-G					
HEXANE	95032A	<1 79	<1.79	<1.79	<1 79	<1 79
UG/M3	TO14-G					
ISOBUTANE	95865A	1 45	<1 21	<1 21	<1 21	<1.21
UG/M3	TO14-G					
ISOOCTANE	95891A	<2.38	<2 38	<2 38	<2.38	<2 38
UG/M3	TO14-G					
ISOPENTANE	95870A	2 46	1.68	<1 50	<1 50	<1 50
UG/M3	TO14-G					
ISOPRENE	95872A	<1.42	<1.42	<1 42	<1 42	<1 42
UG/M3	TO14-G					
ISOPROPYL ALCOHOL	95754A	<12 5	<12 5	<12 5	<12 5	<12 5
UG/M3	TO14-G					
M,P-XYLENE	97234A	<2 21	<2 21	<2.21	<2 21	<2 21
UG/M3	TO14-G					
METHACRYLONITRILE	95761A	<14 0	<14 0	<14 0	<14 0	<14 0
UG/M3	TO14-G					
METHANOL	77885A	<6 65	<6 65	<6 65	<6 65	<6 65
UG/M3	TO14-G					
METHYL ETHYL KETONE	81595A	<15 0	<15 0	<15 0	<15 0	<15.0
UG/M3	TO14-G					
METHYL ISOBUTYL KETONE	81596A	<20 8	<20 8	<20 8	<20 8	<20 8
UG/M3	TO14-G					
METHYL METHACRYLATE	95769A	<20 8	<20 8	<20 8	<20 8	<20 8
UG/M3	TO14-G					
METHYL TERT-BUTYL ETHER	95764A	<18 3	<18 3	<18 3	<18 3	<18 3
UG/M3	TO14-G					
METHYLCYCLOHEXANE	95892A	<2 04	<2 04	<2 04	<2 04	<2 04
UG/M3	TO14-G					
METHYLCYCLOPENTANE	95885A	<1.75	<1 75	<1 75	<1 75	<1.75
UG/M3	TO14-G					
METHYLENE CHLORIDE	34423A	<1 77	<1 77	<1 77	<1 77	<1 77
UG/M3	TO14-G					
NONANE	95864A	2 32	<1 21	<1 21	<1 21	<1 21
UG/M3	TO14-G					

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

SAMPLE ID'S		JX00875	JX00876	JX00877	JX00878	JX00879
PARAMETERS	STORET	BEMISCA	BEMISCA	BEMISCA	BEMISCA	BEMISCA
UNITS	METHOD	11	12	13	14	15
DATE		04/23/98	04/23/98	04/23/98	04/23/98	04/27/98
TIME		14.30	14.45	15 00	15 30	14 30
N-PROPYLBENZENE	95898A	<2.50	<2 50	<2.50	<2.50	<2 50
UG/M3	TO14-G					
NITROBENZENE	95771A	<25 6	<25 6	<25 6	<25 6	<25.6
UG/M3	TO14-G					
NONANE	95896A	<2.67	<2 67	<2.67	<2.67	<2 67
UG/M3	TO14-G					
O-XYLENE	97235A	<2.21	<2 21	<2.21	<2 21	<2 21
UG/M3	TO14-G					
OCTANE	95029A	<2.38	<2 38	<2.38	<2.38	<2.38
UG/M3	TO14-G					
PENTANE	95024A	<1 50	<1 50	<1.50	<1 50	<1 50
UG/M3	TO14-G					
PROPIONITRILE	95760A	<11 5	<11 5	<11 5	<11.5	<11 5
UG/M3	TO14-G					
PROPYLENE	95022A	2.33	3.29	1.05	1.66	<0 88
UG/M3	TO14-G					
STYRENE	77128A	<2 17	<2.17	<2.17	<2.17	<2.17
UG/M3	TO14-G					
TETRACHLOROETHENE	34475A	3030	9 85	<3.45	<3 45	<3 45
UG/M3	TO14-G					
TETRAHYDROFURAN	95766A	<15.0	<15 0	<15 0	<15 0	<15 0
UG/M3	TO14-G					
TOLUENE	34010A	<1.92	<1 92	<1.92	<1.92	<1 92
UG/M3	TO14-G					
TRANS-1,2-DICHLOROETHENE	95034A	403	<2.02	4 88	<2 02	<2.02
UG/M3	TO14-G					
TRANS-1,3-DICHLOROPROPENE	34699A	<2.31	<2.31	<2.31	<2.31	<2.31
UG/M3	TO14-G					
TRANS-2-BUTENE	95867A	<1.17	<1 17	<1.17	<1.17	<1.17
UG/M3	TO14-G					
TRANS-2-HEXENE	95884A	<1.75	<1.75	<1.75	<1.75	<1.75
UG/M3	TO14-G					
TRANS-2-PENTENE	95873A	<1.46	<1 46	<1.46	<1.46	<1.46
UG/M3	TO14-G					
TRICHLOROETHENE	39180A	797	5 19	<2.73	<2.73	<2.73
UG/M3	TO14-G					
TRIFLUOROMETHANE	34488A	<2.86	<2.86	<2.86	<2.86	<2 86
UG/M3	TO14-G					
VINYL ACETATE	95767A	<17 9	<17 9	<17 9	<17 9	<17 9
UG/M3	TO14-G					
VINYL CHLORIDE	39175A	5 20	<1.30	<1.30	1 59	<1.30
UG/M3	TO14-G					

QST ENVIRONMENTAL

CASE NARRATIVE - SDG BEMISCA.4

Three air samples were collected on March 31, 1998 and April 6 and 13, 1998. All samples were received at QST Environmental on April 7, 8 and 16, 1998. All samples were analyzed as requested in the traffic forms. All samples were extracted and analyzed within EPA holding time.

Bechtel - Jacksonville - TO14

Analysis	Lab Batch
VOCs Air (TO14)	G89928
VOCs Air (TO14)	G90068

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness except as detailed in this case narrative.

June 30, 1998

QST ENVIRONMENTAL

Virginia C. O'Brien / for

Dan Moore
Chemistry Project Manager

PO Box 1703 Gainesville FL 32602-1703, Phone 352•332•3318 FAX 352•333•6622
A CILCORP COMPANY
Formerly Environmental Science & Engineering Inc

14766

Lab Sample Cross Reference and Date Report

Client ID	Lab ID	Method	Collect Date	Receipt Date	Extract Date	HT Days	Analysis Date	HT Days	Batch
JX00852	BEMISCA*3	VOCs Air(TO14)	03/31/98	04/07/98	NA	NA	04/09/98	30(9)	G89928
JAX106EFF	BEMISCA*4	VOCs Air(TO14)	04/06/98	04/08/98	NA	NA	04/09/98	30(3)	G89928
JAX863	BEMISCA*5	VOCs Air(TO14)	04/13/98	04/16/98	NA	NA	04/17/98	30(4)	G90068

Actual days in parentheses

G89928

GENERAL COMMENTS.

BATCH NARRATIVE

Batch G89928
Client/Samples Bechtel
Analyst. Matthew Booth/3395
Date 04/09/98

Sample Number	Client ID	Canister Number	Date Collected	Date Received	Date Analyzed	Intial Pressure
BEMISCA*3	JX00852	DL101	03/31/98	04/07/98	04/09/98	1.3 "Hg
BEMISCA*4	JAX106EFF	DL823	04/06/98	04/08/98	04/09/98	0.2 "Hg

EXPLANATION OF QC FAILURES:
The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background.

PROBLEM:
Reference Standard fails criteria.

EXPLANATION:
Reference Standard results for Methylene Chloride is high due to residual levels of this compound in the canister. A new canister will be used for the reference standard before further analyses are performed.

G90068

GENERAL COMMENTS:

BATCH NARRATIVE

Batch G90068
Client/Samples: Bechtel
Analyst Matthew Booth/3395
Date: 04/17/98

Sample Number	Client ID	Canister Number	Date Collected	Date Received	Date Analyzed	Intial Pressure
BEMISCA*5	Bld. 106 JAX 863	DL827	04/13/98	04/16/98	04/19/98	1.0 "Hg

EXPLANATION OF QC FAILURES:
The %RSD in the initial calibration and the %D in the CCS are greater than 30% for Chloromethane due to the presence of this compound in the background.

QST Environmental DATE 06/30/98 STATUS

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S METERS UNITS	STORET METHOD	JX00852 BEMISCA 3	JAX106EFF BEMISCA 4	JAX863 BEMISCA 5
		03/31/98	04/06/98	04/13/98
TIME		11.45	11.00	14:30
1,1,1-TRICHLOROETHANE	34506A	<2.78	<2.78	<2.78
UG/M3	TO14-G			
1,1,2,2-TETRACHLOROETHANE	34516A	<3.49	<3.49	<3.49
UG/M3	TO14-G			
1,1,2-TRICHLOROETHANE	34511A	<2.78	<2.78	<2.78
UG/M3	TO14-G			
1,1-DICHLOROETHANE	34496A	<2.06	<2.06	<2.06
UG/M3	TO14-G			
1,1-DICHLOROETHYLENE	34501A	<2.02	<2.02	<2.02
UG/M3	TO14-G			
1,2,4-TRICHLOROBENZENE	34551A	<3.77	<3.77	<3.77
UG/M3	TO14-G			
1,2,4-TRIMETHYLBENZENE	77222A	<2.50	<2.50	<2.50
UG/M3	TO14-G			
1,2-DIBROMOETHANE(EDB)	77651A	<3.91	<3.91	<3.91
UG/M3	TO14-G			
1,2-DICHLOROBENZENE	34536A	<3.06	<3.06	<3.06
UG/M3	TO14-G			
1,2-DICHLOROETHANE	34531A	<2.06	<2.06	<2.06
UG/M3	TO14-G			
1,2-DICHLOROPROPANE	34541A	<2.35	<2.35	<2.35
UG/M3	TO14-G			
1,3,5-TRIMETHYLBENZENE	77226A	<2.50	<2.50	<2.50
UG/M3	TO14-G			
1,3,DICHLOROBENZENE	34566A	<3.06	<3.06	<3.06
UG/M3	TO14-G			
BUTADIENE	95023A	<1.13	<1.13	<1.13
UG/M3	TO14-G			
1,4-DICHLOROBENZENE	34571A	4.77	3.91	<3.06
UG/M3	TO14-G			
1[illegible]IOXANE	97195A	<18.3	<18.3	<18.3
UG/M3	TO14-G			
1-BUTANOL	95755A	<15.4	<15.4	<15.4
UG/M3	TO14-G			
1-BUTENE	95866A	4.01	3.89	5.13
UG/M3	TO14-G			
1-PENTENE	95871A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
2,2-DIMETHYLBUTANE	95879A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
2,3,4-TRIMETHYLPENTANE	95893A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
2,3-DIMETHYLBUTANE	95886A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
2,3-DIMETHYLPENTANE	95889A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
2-CHLORO-1,3-BUTADIENE	95033A	<1.84	<1.84	<1.84
UG/M3	TO14-G			
2-HEXANONE	95756A	<20.8	<20.8	<20.8
UG/M3	TO14-G			
2-METHYL HEPTANE	95894A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
2-METHYL HEXANE	95888A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
2-METHYL PENTANE	95880A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
2-METHYL-1-PENTENE	95882A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
2-METHYL-2-BUTENE	95875A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
TROPROPANE	95770A	<18.5	<18.5	<18.5
UG/M3	TO14-G			
3[illegible]ORO-1-PROPENE	95025A	<1.59	<1.59	<1.59
UG/M3	TO14-G			

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S		JX00852	JAX106EFF	JAX863
METERS	STORET	BEMISCA	BEMISCA	BEMISCA
UNITS	METHOD	3	4	5
ATE		03/31/98	04/06/98	04/13/98
TIME		11.45	11 00	14.30
3-METHYL HEPTANE	95895A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
3-METHYL HEXANE	95890A	<2.09	<2.09	<2 09
UG/M3	TO14-G			
3-METHYL PENTANE	95881A	<1.79	<1.79	<1 79
UG/M3	TO14-G			
3-METHYL-1-BUTENE	95869A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
4-METHYL-1-PENTENE	95877A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
ACETONE	81552A	<12.5	<12 5	<12.5
UG/M3	TO14-G			
ACETONITRILE	95758A	<8.55	<8.55	<8.55
UG/M3	TO14-G			
ACETOPHENONE	81553A	<25.0	<25.0	<25.0
UG/M3	TO14-G			
ACROLEIN	95757A	<11.7	<11.7	<11.7
UG/M3	TO14-G			
ACRYLONITRILE	95759A	<11.1	<11.1	<11.1
UG/M3	TO14-G			
ALPHA-METHYL-STYRENE	95030A	<2.46	<2.46	<2.46
UG/M3	TO14-G			
ALPHA-PINENE	95899A	<2.83	<2.83	<2.83
UG/M3	TO14-G			
BENZENE	34030A	<1.63	<1.63	<1.63
UG/M3	TO14-G			
ONITRILE	95762A	<21.5	<21.5	<21.5
UG/M3	TO14-G			
ENZYL CHLORIDE	97754A	<2.63	<2.63	<2.63
UG/M3	TO14-G			
TA-PINENE	95900A	12.5	10.6	<2.83
UG/M3	TO14-G			
BROMODICHLOROMETHANE	95026A	<3.41	<3.41	<3.41
UC/M3	TO14-G			
BROMOFORM	95031A	<5.3	<5.3	<5.3
UG/M3	TO14-G			
BRO[illegible]NE	34413A	<1.98	<1.98	<1.98
[illegible]G/M3	TO14-G			
[illegible]LFIDE	95772A	<15.9	<15.9	<15.9
UG/M3	TO14-G			
CARBON TETRACHLORIDE	32102A	<3.20	<3.20	<3 20
UG/M3	TO14-G			
CHLOROBENZENE	34301A	<2.34	<2.34	<2.34
UG/M3	TO14-G			
CHLORODIFLUOROMETHANE	95021A	<1.80	<1.80	<1.80
UG/M3	TO14-G			
CHLOROETHANE	34311A	<1.34	<1.34	<1.34
UG/M3	TO14-G			
CHLOROFORM	32106A	<2.48	<2.48	<2.48
UG/M3	TO14-G			
CHLOROMETHANE	34418A	5.50	5.82	5.42
UG/M3	TO14-G			
CIS-1,2-DICHLOROETHENE	77093A	<2.02	<2.02	<2.02
UG/M3	TO14-G			
CIS-1,3-DICHLOROPROPENE	34704A	<2.31	<2.31	<2.31
UG/M3	TO14-G			
CIS-2-BUTENE	95868A	<1.17	<1.17	<1.17
UG/M3	TO14-G			
CIS-2-HEXENE	95883A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
-PENTENE	95874A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
ENE	95897A	<2.50	<2.50	<2.50
UG/M3	TO14-G			

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14 ALT LAB COORDINATOR HUGH PRENTICE

LE ID'S		JX00852	JAX106EFF	JAX863
METERS	STORET	BEMISCA	BEMISCA	BEMISCA
UNITS	METHOD	3	4	5
ATE		03/31/98	04/06/98	04/13/98
TIME		11.45	11.00	14:30
CYCLOHEXANE	95887A	<1.75	<1 75	<1.75
UG/M3	TO14-G			
CYCLOHEXANONE	77097A	<20.4	<20 4	<20 4
UG/M3	TO14-G			
CYCLOPENTANE	95878A	<1.46	<1 46	<1.46
UG/M3	TO14-G			
CYCLOPENTENE	95876A	<1.42	<1 42	<1.42
UG/M3	TO14-G			
DIBROMOCHLOROMETHANE	95028A	<4 33	<4 33	<4.33
UG/M3	TO14-G			
DICHLORODIFLUOROMETHANE	34668A	3.70	3 65	2.89
UG/M3	TO14-G			
ETHANOL (ETHYL ALCOHOL)	95753A	<9 60	<9 60	<9.60
UG/M3	TO14-G			
ETHER	95763A	<15.4	<15 4	<15.4
UG/M3	TO14-G			
ETHYL ACRYLATE	95768A	<20 8	<20 8	<20.8
UG/M3	TO14-G			
ETHYL TERT-BUTYL ETHER	95765A	<21.3	<21.3	<21.3
UG/M3	TO14-G			
ETHYLBENZENE	34371A	<2.21	<2.21	<2.21
UG/M3	TO14-G			
FREON 113	77647A	<3.90	<3.90	<3.90
UG/M3	TO14-G			
FREON 114	96776A	<3.56	<3.56	<3.56
UG/M3	TO14-G			
ANE	95027A	<2.09	<2.09	<2.09
UG/M3	TO14-G			
XACHLOROBUTADIENE	34391A	<5.3	<5.3	<5.3
UG/M3	TO14-G			
HEXANE	95032A	<1.79	<1.79	<1.79
UG/M3	TO14-G			
ISOBUTANE	95865A	2.30	2.44	<1.21
UG/M3	TO14-G			
ISOOCTANE	95891A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
ISOPENTANE	95870A	17.2	14.5	<1.50
UG/M3	TO14-G			
ISOPRENE	95872A	<1.42	<1.42	<1.42
UG/M3	TO14-G			
ISOPROPYL ALCOHOL	95754A	<12.5	<12 5	<12.5
UG/M3	TO14-G			
M,P-XYLENE	97234A	<2.21	<2.21	<2.21
UG/M3	TO14-G			
METHACRYLONITRILE	95761A	<14.0	<14.0	<14 0
UG/M3	TO14-G			
METHANOL	77885A	14.9	15.4	7.28
UG/M3	TO14-G			
METHYL ETHYL KETONE	81595A	<15.0	<15.0	<15.0
UG/M3	TO14-G			
METHYL ISOBUT'KETONE	81596A	<20.8	<20.8	<20.8
UG/M3	TO14-G			
METHYL METHACRYLATE	95769A	<20.8	<20.8	<20.8
UG/M3	TO14-G			
METHYL TERT-BUTYL ETHER	95764A	<18.3	<18.3	<18 3
UG/M3	TO14-G			
METHYLCYCLOHEXANE	95892A	<2.04	<2.04	<2.04
UG/M3	TO14-G			
METHYLCYCLOPENTANE	95885A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
YLENE CHLORIDE	34423A	<1.77	<1.77	<1.77
UG/M3	TO14-G			
BUTANE	95864A	2.44	2.83	2.20
UG/M3	TO14-G			

PROJECT NUMBER 1298517G 0203 PROJECT NAME MISC. AIR-BECHTEL
FIELD GROUP BEMISCA PROJECT MANAGER HUGH PRENTICE
TO14.ALT LAB COORDINATOR HUGH PRENTICE

PLE ID'S AMETERS	STORET METHOD	JX00852 BEMISCA 3	JAX106EFF BEMISCA 4	JAX863 BEMISCA 5
UNITS				
[illegible]		03/31/98	04/06/98	04/13/98
TIME		11.45	11 00	14:30
N-PROPYLBENZENE	95898A	<2.50	<2.50	<2.50
UG/M3	TO14-G			
NITROBENZENE	95771A	<25 6	<25 6	<25.6
UG/M3	TO14-G			
NONANE	95896A	<2.67	<2.67	<2.67
UG/M3	TO14-G			
O-XYLENE	97235A	<2.21	<2.21	<2.21
UG/M3	TO14-G			
OCTANE	95029A	<2.38	<2.38	<2.38
UG/M3	TO14-G			
PENTANE	95024A	<1.50	<1.50	<1.50
UG/M3	TO14-G			
PROPIONITRILE	95760A	<11.5	<11.5	<11.5
UG/M3	TO14-G			
PROPYLENE	95022A	5.22	2.52	1.96
UG/M3	TO14-G			
STYRENE	77128A	<2.17	<2.17	<2.17
UG/M3	TO14-G			
TETRACHLOROETHENE	34475A	<3.45	<3.45	<3.45
UG/M3	TO14-G			
TETRAHYDROFURAN	95766A	<15 0	<15 0	<15.0
UG/M3	TO14-G			
TOLUENE	34010A	2.72	2.07	<1.92
UG/M3	TO14-G			
TRANS-1,2-DICHLOROETHENE	95034A	<2.02	<2.02	<2.02
UG/M3	TO14-G			
IS-1,3-DICHLOROPROPENE	34699A	<2.31	<2.31	<2.31
UG/M3	TO14-G			
[illegible]NS-[illegible] [illegible]ENE	95867A	<1.17	<1.17	<1.17
UG/M3	TO14-G			
[illegible]S-2-HEXENE	95884A	<1.75	<1.75	<1.75
UG/M3	TO14-G			
[illegible]-2-PENTENE	95873A	<1.46	<1.46	<1.46
UG/M3	TO14-G			
TRICHLOROETHENE	39180A	5.90	4.10	<2.73
UG/M3	TO14-G			
TRICHLOROFLUOROMETHANE	34488A	<2.86	<2.86	<2.86
UG/M3	TO14-G			
VINYL ACETATE	95767A	<17.9	<17 9	<17.9
UG/M3	TO14-G			
VINYL CHLORIDE	39175A	1.82	1.85	<1.30
UG/M3	TO14-G			

ATTACHMENT D
START UP OFF GAS ANALYTICAL RESULTS

SOIL VAPOR EXTRACTION SYSTEM
START UP OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes
SVE Lateral #1	3/16/98	SVE-1 2100-16	0 055	7 6	14	11	10	42 66
north	3/17/98	SVE-106-1-0900-17	0 085	9 8	28	27	51	115 89
	3/17/98	SVE-1-2100	0 120	82 0	190 0	230 0	330	832 12
	3/18/98	SVE106-1-0900-18	0 058	0 039	<0 00003	0 049	0 082	0 23
	3/18/98	SVE-1-2100-18	0 027	6 9	9 9	14	17	47 83
	3/19/98	SVE106-1-0900-19	0 140	16 0	38	52	83	189 14
	3/19/98	SVE-106-1-2100-19	0 280	10 0	28	33	81	152 28
	3/20/98	SVE-106-1-0900-20	0 940	0 69	0 94	1 7	3 4	7 67
	3/22/98	SVE-106-1-0900-22	0 015	2 9	4 2	9	17	33 12
	3/23/98	SVE-106-1-0900-23	0 035	0 33	0 55	1 2	4 1	6 22
	3/24/98	SVE106-1-0900-24	0 068	1 2	2 2	5 1	26	34 57
	3/25/98	SVE106-1-0900-25	0 130	3 3	6 7	20 0	110	140 13
	3/26/98	SVE106-1-26-0900	0 230	4 6	9 9	25 0	250	289 73
	3/27/98	SVE106-1-0900-27	0 035	4 9	8 6	42 0	1,000	1,055 54
	3/28/98	SVE-106-1-0900-28	0 037	4 1	7 4	48 0	~~250~~ 2500	309 54
3/29/98	~~3/30/98~~	SVE106-1-0900-29	0 024	3 3	5 0	18 0	300	326 32

SOIL VAPOR EXTRACTION SYSTEM
START UP OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes
SVE Lateral #2	3/16/98	SVE-2 2100-16	0 005	0 083	0 220	0 350	1 300	1 958
	3/17/98	SVE-106-2-0900-17	0 027	0 850	2 4	2 9	8 2	14 377
	3/17/98	SVE-2-2100	0 011	0 160	0 410	0 550	1 8	2 931
	3/18/98	SVE106-2-0900-18	0 014	0 190	0 460	0 620	1 9	3 184
	3/18/98	SVE-2-2100-18	0 007	0 085	0 180	0 280	0 940	1 492
	3/19/98	SVE106-2-0900-19	0 022	0 610	1 4	2 2	5 2	9 432
	3/19/98	SVE-106-2-2100-19	0 027	0 480	1 1	1 9	3 5	7 007
	3/20/98	SVE-106-2-0900-20	0 022	0 420	0 850	1 6	4 5	7 392
	3/22/98	SVE-106-2-0900-22	0 008	0 170	0 170	0 360	0 810	1 518
	3/23/98	SVE106-2-0900-23	0 017	0 130	0 120	0 280	0 560	1 107
	3/24/98	SVE106-2-0900-24	0 029	0 210	0 190	0 420	1 10	1 949
	3/25/98	SVE106-2-0900-25	0 041	0 037	0 057	0 110	0 320	0 565
	3/26/98	SVE106-2-26-0900	0 084	0 064	0 084	0 160	0 380	0 772
	3/27/98	SVE106-2-0900-27	0 014	0 042	0 070	0 130	0 550	0 806
	3/28/98	SVE-106-2-0900-28	0 011	0 037	0 074	0 120	0 400	0 642
	3/30/98	SVE106-2-0900-29	0 01	0 049	0 067	0 130	0 560	0 816

SOIL VAPOR EXTRACTION SYSTEM
START UP OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes
Mid-Carbon	3/16/98	Between Carbons 2100-16	0 002	0 002	<0 00003	0 003	0 005	0 012
	3/17/98	BC 0900-17	0 002	0 002	<0 00003	0 006	0 004	0 014
	3/17/98	Between Carbons 2100	<0 0002	<0 00006	<0 00003	0 002	0 003	0 005
	3/18/98	BC-0900-18	0 003	0.002	<0 00003	0 003	0 004	0 012
	3/18/98	Between-2100-18	0 003	0 002	<0 00003	0 002	0 008	0 015
	3/19/98	BC-0900-19	0 004	0 012	0 027	0 039	0 082	0 164
	3/19/98	Between-2100-19	0 003	<0 00006	<0 00003	0 002	0 002	0 007
	3/20/98	BC-0900-20	0 005	<0 00006	0 001	0 002	0 003	0 011
	3/21/98	Between106-0900-21	0 002	0 002	<0 00003	0 002	0 003	0 009
	3/22/98	Between106-0900-22	0 002	0 002	<0 00003	0 003	0 004	0 011
	3/23/98	Between106-0900-23	0 004	0 033	0 041	0 170	0 810	1 058
	3/24/98	CB106-1-0900-24	0 006	0 002	<0 00003	0 003	0 003	0 014
	3/25/98	BC-0900-25	0 011	0 002	<0 00003	0 001	0 002	0 016
	3/26/98	Between106-26-0900	0 027	0 001	<0 00003	0 002	0 002	0 032
	3/27/98	SVE-106-Between-0900-27	0 005	<0 00006	<0 00003	<0 0001	0 001	0 006
	3/28/98	SVE-106-Between-0900-28	0 006	<0 00006	0 017	0 016	0 035	0 074
	3/30/98	SVE-106-Between-0900-29	0 004	<0 00006	<0 00003	0 003	0 005	0 012

SOIL VAPOR EXTRACTION SYSTEM
START UP OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes
Post-Carbon	3/16/98	Discharge 2100-16	0 004	0 003	<0 00003	0 006	0 010	0 023
	3/17/98	CD 0900-17	0 002	0 002	<0 00003	0 004	0 004	0 012
	3/17/98	Discharge 2100	0 005	0 011	0 025	0 029	0 044	0 114
	3/18/98	CD-0900-18	0 003	0 002	<0 00003	0 004	0 004	0 013
	3/18/98	Discharge-2100-18	0 003	0 002	<0 00003	0 003	0 007	0 015
	3/19/98	CD-0900-19	0 006	0 730	1 700	1 900	4 200	8 536
	3/19/98	Discharge-2100-19	0 005	0 005	0 004	0 009	0 014	0 037
	3/20/98	CD-0900-20	<0 0002	<0 00006	<0 00003	0 001	0 002	0 003
	3/21/98	Discharge106-0900-21	0 001	0 010	0 024	0 028	0 062	0 125
	3/22/98	Discharge106-0900-22	0 002	0 002	<0 00003	0 002	0 003	0 009
	3/23/98	Discharge106-0900-23	0 003	0 002	<0 00003	0 001	0 003	0 009
	3/24/98	CD106-1-0900-24	0 002	0 008	0 010	0 022	0 058	0 100
	3/25/98	CD-0900-25	0 009	0 007	0 008	0 018	0 040	0 082
	3/26/98	Discharge106-26-0900	0 013	0 001	<0 00003	<0 0001	0 003	0 017
	3/27/98	SVE106-Discharge-0900-27	0 002	<0 00006	<0 00003	<0 0001	<0 00008	0 002
	3/28/98	SVE106-Discharge-0900-28	0 004	<0 00006	<0 00003	<0 0001	<0 00008	0 004
	3/30/98	SVE106-Discharge-0900-29	<0 002	<0 00006	<0 00003	0 002	0 007	0 009

Notes 1 All concentrations reported in milligrams per cubic meter

2 In computing "Total" categories, all non-detected concentrations were assumed to be zero

3 Total Chlorinated ethenes = Sum of Vinyl Chlride, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Trichloroethene, and Tetrachloroethene constituents

TCE = trichloroethene

PCE = tetrachloroethene

DCE = dichloroethene

SVE = Soil Vapor Extraction

< = Analyte not detected at the detection level shown

Soil Vapor Extraction & Air Sparge System Quarterly Report

for NAS JACKSONVILLE - Building 106
3rd Quarter 1998

Start Date: 7/1//98
End Date: 9/30/98
Report Date: 1/22/99

OBJECTIVE:

The objective of the remediation activities at Building 106 is to clean the contaminated groundwater and unsaturated soils to acceptable levels according to Florida Department of Environmental Protection (FDEP) requirements. Soil vapor extraction (SVE) and in-situ air sparging (AS) are the two technologies utilized to achieve this objective.

SITE BACKGROUND:

The Site is located on NAS Jacksonville at Building 106 and has housed a dry cleaning facility since 1962. From 1962 to 1990, the dry cleaning operation consisted of one dry cleaning machine and one post dry cleaning machine. The system was upgraded in 1990 to a single machine that performs both dry cleaning and the drying processes. Both the current and former system configurations used tetrachlorethene (also known as perchlorethylene or PCE), which was stored in a variety of manners within Building 106.

In 1995, the Navy and its Comprehensive Long-Term Environmental Action Navy contractor performed a study that detected various degrees of chlorinated volatile organic compounds (VOCs) in the soil and groundwater at the Building 106 study areas. Historical information suggest that the substances were most likely released by spills and past operational practices.

DESCRIPTION OF TECHNOLOGIES UTILIZED:

Soil vapor extraction is performed by applying a negative pressure, or vacuum, to SVE laterals placed 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 then be removed via the SVE lateral wells.

Air sparging is a method of expediting the transfer of saturated zone VOCs from the groundwater table to the vadose zone, where a SVE system can complete the VOC removal process. Hydrocarbon-free air is injected into air sparging wells, which are screened within the groundwater contaminant plume. As the injected air passes upward through the VOC laden groundwater and soil, VOCs are partitioned to the passing air and migrate to the vadose zone. The SVE wells, which are located in the vadose zone

above the sparging area, apply a vacuum such that the sparging air is captured and removed from the subsurface.

OPERATIONAL EFFICIENCIES

There are no hour meters on the SVE/AS system to base operational efficiencies, however use of the system checklists will used to produce an estimated performance efficiency. The SVE/AS systems are interlocked and will only operate together, therefore, there will be only one operating efficiency for both systems.

SVE/AS SYSTEM	This Period:	To Date:
Hours of Possible Operation:	2,208	4,776
Estimated Hours of Actual Operation:	2,028	4,588
Percent Hours of Operation:	91.9%	96.1%

SOIL VAPOR MONITORING

System soil vapor monitoring consists of weekly and monthly sampling events. The SVE influent (one from each lateral) is sampled monthly using EPA Method TO14. A point between the two carbon units is also sampled monthly using EPA Method TO14. The carbon unit discharge is sampled weekly using EPA Method TO14. These sampling events are summarized in tables provided in Attachment B.

Monthly Sampling Events

Monthly sampling events at SVE influent, mid carbon, and carbon unit discharge were performed on July 1, August 31, and September 30, 1998. The analytical results as well as mass loading rates are summarized in Attachment B. Copies of the analytical laboratory reports are provided in Attachment C. A site map which shows the locations of the on-site monitoring wells, sparge wells, and SVE laterals is provided in Attachment A.

SYSTEM PERFORMANCE MONITORING

During the period, the SVE/AS system was monitored weekly to evaluate system performance. The operating parameters of the SVE system showed an average flow rate of 250 cfm at 35.3 inches of water vacuum which created an average of 1.45 inches of

water vacuum at eight associated monitoring wells. The operating parameters of the AS system showed an average air flow rate of 18.6 cfm at 127.2 inches of water column pressure providing an average of 99.6 inches of water at the eleven sparge wells.

SUMMARY OF MAINTENANCE AND SYSTEM DOWN TIME

During the period of July 1 to September 30, the SVE/AS systems experienced six shut downs which resulted in a total of approximately 180 hours of down time. The systems experienced an automatic shut down on August 3, 1998 due to high level in the moisture separator. The moisture separator was drained and the system restarted. The systems were shut down manually on August 10, 1998 to make a minor piping modification to the SVE system. The systems were shut down to allow the carbon bed to be changed out in the east carbon unit. The spent carbon was sampled and containerized for disposal by Great Lakes Carbon. Analytical results, as well as copies of the analytical lab report are contained in Attachment D. The systems incurred three additional automatic shutdowns on August 17, August 19, and August 21, 1998, two were due to high level in the moisture separator and the third was caused by a power surge. The systems ran consistently throughout the balance of the monitoring period.

RECCOMENDATIONS

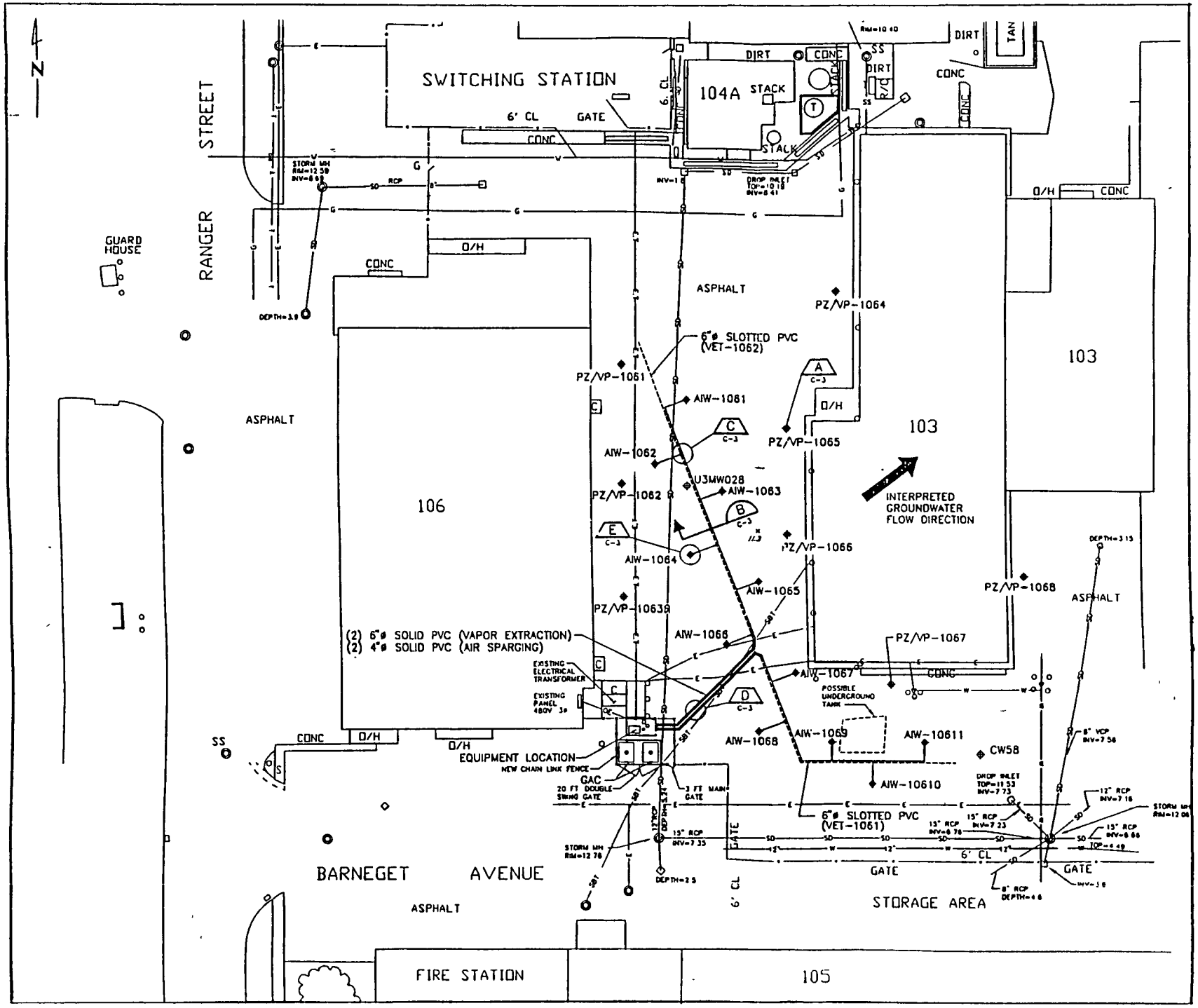
The SVE/AS system is effectively treating subsurface contamination at the site but more time will be needed to establish a remediation trend. The system will continue to be adjusted in an effort to optimize performance.

ATTACHMENTS

A. Site Map
B. Summary of Soil Vapor Analytical Data
C. Soil Vapor Analytical Laboratory Reports
D. Spent Carbon Analytical Results

ATTACHMENT A
SITE MAP

SOIL VAPOR EXTRACTION AND AIR SPARGE SYSTEM
SITE MAP
BUILDING 106
NAS JACKSONVILLE



ATTACHMENT B
SUMMARY OF SOIL VAPOR ANALYTICAL DATA

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
SVE Lateral #1	3/16/98	SVE-1 2100-16	0 055	7 600	14 000	11 000	10 000	42 655	0 001	0 102	0 189	0 148	0 135	0 575
	3/17/98	SVE-106-1-0900-17	0 085	9 800	28 000	27 000	51 000	115 885	0 001	0 132	0 378	0 364	0 688	1 563
	3/17/98	SVE-1-2100	0 120	82 000	190 000	230 000	330 000	832 120	0 002	1 106	2 562	3 102	4 450	11 222
	3/18/98	SVE106-1-0900-18	0 058	0 039	<0 00003	0 049	0 082	0 228	0 001	0 001	<0 001	0 001	0 001	0 003
	3/18/98	SVE-1-2100-18	0 027	6 900	9 900	14 000	17 000	47 827	<0 001	0 093	0 134	0 189	0 229	0 645
	3/19/98	SVE106-1-0900-19	0 140	16 000	38 000	52 000	83 000	189 140	0 002	0 216	0 512	0 701	1 119	2 551
	3/19/98	SVE-106-1-2100-19	0 280	10 000	28 000	33 000	81 000	152 280	0 004	0 135	0 378	0 445	1 092	2 054
	3/20/98	SVE-106-1-0900-20	0 940	0 690	0 940	1 700	3 400	7 670	0 013	0 009	0 013	0 023	0 046	0 103
	3/22/98	SVE-106-1-0900-22	0 015	2 900	4 200	9 000	17 000	33 115	<0 001	0 039	0 057	0 121	0 229	0 447
	3/23/98	SVE-106-1-0900-23	0 035	0 330	0 550	1 200	4 100	6 215	<0 001	0 004	0 007	0 016	0 055	0 084
	3/24/98	SVE106-1-0900-24	0 068	1 200	2 200	5 100	26 000	34 568	0 001	0 016	0 030	0 069	0 351	0 466
	3/25/98	SVE106-1-0900-25	0 130	3 300	6 700	20 000	110 000	140 130	0 002	0 045	0 090	0 270	1 483	1 890
	3/26/98	SVE106-1-26-0900	0 230	4 600	9 900	25 000	250 000	289 730	0 003	0 062	0 134	0 337	3 372	3 907
	3/27/98	SVE106-1-0900-27	0 035	4 900	8 600	42 000	1000 000	1055 535	<0 001	0 066	0 116	0 566	13 486	14 235
	3/28/98	SVE-106-1-0900-28	0 037	4 100	7 400	48 000	250 000	309 537	<0 001	0 055	0 100	0 647	3 372	4 175
	3/30/98	SVE106-1-0900-29	0 024	3 300	5 000	18 000	300 000	326 324	<0 001	0 045	0 067	0 243	4 046	4 401
	4/23/98	JX00875	0 005	0 221	0 403	0 797	3 030	4 456	0 000	0 003	0 005	0 011	0 041	0 060
	5/19/98	JX00885	0 005	2 710	4 720	8 410	30 300	46 145	0 000	0 037	0 064	0 113	0 409	0 622
	6/8/98	JX00896	0 023	1 200	2 500	2 800	9 200	15 723	0 000	0 016	0 034	0 038	0 124	0 212
	7/1/98	JX00946	0 024	1 300	2 900	3 000	8 700	15 924	0 000	0 018	0 039	0 040	0 117	0 215
	8/31/98	JX01013	0 005	0 640	4 300	3 800	14 000	22 745	0 000	0 009	0 058	0 051	0 189	0 307
	9/30/98	JX01027	0 031	2 600	5 700	4 100	12 000	24 431	0 000	0 035	0 077	0 055	0 162	0 329

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
SVE Lateral #2	3/16/98	SVE-2 2100-16	0 005	0 083	0 220	0 350	1 300	1 958	<0 001	0 001	0 003	0 005	0 018	0 026
	3/17/98	SVE-106-2-0900-17	0 027	0 850	2 400	2 900	8 200	14 377	<0 001	0 011	0 032	0 039	0 111	0 194
	3/17/98	SVE-2-2100	0 011	0 160	0 410	0 550	1 800	2 931	<0 001	0 002	0 006	0 007	0 024	0 040
	3/18/98	SVE106-2-0900-18	0 014	0 190	0 460	0 620	1 900	3 184	<0 001	0 003	0 006	0 008	0 026	0 043
	3/18/98	SVE-2-2100-18	0 007	0 085	0 180	0 280	0 940	1 492	<0 001	0 001	0 002	0 004	0 013	0 020
	3/19/98	SVE106-2-0900-19	0 022	0 610	1 400	2 200	5 200	9 432	<0 001	0 008	0 019	0 030	0 070	0 127
	3/19/98	SVE-106-2-2100-19	0 027	0 480	1 100	1 900	3 500	7 007	<0 001	0 006	0 015	0 026	0 047	0 094
	3/20/98	SVE-106-2-0900-20	0 022	0 420	0 850	1 600	4 500	7 392	<0 001	0 006	0 011	0 022	0 061	0 100
	3/22/98	SVE-106-2-0900-22	0 008	0 170	0 170	0 360	0 810	1 518	<0 001	0 002	0 002	0 005	0 011	0 020
	3/23/98	SVE106-2-0900-23	0 017	0 130	0 120	0 280	0 560	1 107	<0 001	0 002	0 002	0 004	0 008	0 015
	3/24/98	SVE106-2-0900-24	0 029	0 210	0 190	0 420	1 100	1 949	<0 001	0 003	0 003	0 006	0 015	0 026
	3/25/98	SVE106-2-0900-25	0 041	0 037	0 057	0 110	0 320	0 565	0 001	<0 001	0 001	0 001	0 004	0 008
	3/26/98	SVE106-2-26-0900	0 084	0 064	0 084	0 160	0 380	0 772	0 001	0 001	0 001	0 002	0 005	0 010
	3/27/98	SVE106-2-0900-27	0 014	0 042	0 070	0 130	0 550	0 806	<0 001	0 001	0 001	0 002	0 007	0 011
	3/28/98	SVE-106-2-0900-28	0 011	0 037	0 074	0 120	0 400	0 642	<0 001	<0 001	0 001	0 002	0 005	0 009
	3/30/98	SVE106-2-0900-29	0 010	0 049	0 067	0 130	0 560	0 816	<0 001	0 001	0 001	0 002	0 008	0 011
	4/23/98	JX00876	<0 0013	<0 00202	<0 00202	0 005	0 010	0 015	<0 001	<0 001	<0 001	<0 001	<0 001	0 000
	5/19/98	JX00886	<0 0013	0 014	0 008	0 018	0 027	0 067	<0 001	<0 001	<0 001	<0 001	<0 001	0 001
	6/8/98	JX00895	0 017	0 078	0 072	0 180	0 250	0 597	0 000	0 001	0 001	0 002	0 003	0 008
	7/1/98	JX00945	0 003	0 067	0 067	0 180	0 280	0 597	0 000	0 001	0 001	0 002	0 004	0 008
	8/31/98	JX01014	<0 001	0 064	0 082	0 130	0 330	0 606	<0 001	0 001	0 001	0 002	0 004	0 008
	9/30/98	JX01028	0 002	0 110	0 100	0 220	0 540	0 972	0 000	0 001	0 001	0 003	0 007	0 013

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
Mid-Carbon	3/16/98	Between Carbons 2100-16	0 002	0 002	<0 00003	0 003	0 005	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	BC 0900-17	0 002	0 002	<0 00003	0 006	0 004	0 014	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	Between Carbons 2100	<0 0002	<0 00006	<0 00003	0 002	0 003	0 005	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/18/98	BC-0900-18	0 003	0 002	<0 00003	0 003	0 004	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/18/98	Between-2100-18	0 003	0 002	<0 00003	0 002	0 008	0 015	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/19/98	BC-0900-19	0 004	0 012	0 027	0 039	0 082	0 164	<0 001	<0 001	<0 001	0 001	0 001	0 002
	3/19/98	Between-2100-19	0 003	<0 00006	<0 00003	0 002	0 002	0 007	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/20/98	BC-0900-20	0 005	<0 00006	0 001	0 002	0 003	0 011	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/21/98	Between106-0900-21	0 002	0 002	<0 00003	0 002	0 003	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/22/98	Between106-0900-22	0 002	0 002	<0 00003	0 003	0 004	0 011	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/23/98	Between106-0900-23	0 004	0 033	0 041	0 170	0 810	1 058	<0 001	<0 001	0 001	0 002	0 011	0 014
	3/24/98	CB106-1-0900-24	0 006	0 002	<0 00003	0 003	0 003	0 014	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/25/98	BC-0900-25	0 011	0 002	<0 00003	0 001	0 002	0 016	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/26/98	Between106-26-0900	0 027	0 001	<0 00003	0 002	0 002	0 032	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/27/98	SVE-106-Between-0900-27	0 005	<0 00006	<0 00003	<0 0001	0 001	0 006	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/28/98	SVE-106-Between-0900-28	0 006	<0 00006	0 017	0 016	0 035	0 074	<0 001	<0 001	<0 001	<0 001	<0 001	0 001
	3/30/98	SVE-106-Between-0900-29	0 004	<0 00006	<0 00003	0 003	0 005	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	4/23/98	JX00877	<0 0130	0 005	0 005	<0 00273	<0 00345	0 010	<0 007	<0 007	<0 001	<0 007	<0 007	0 000
	5/19/98	JX00887	0 012	<0 00202	<0 00202	<0 00273	<0 00345	0 012	0 000	<0 007	<0 007	<0 007	<0 007	0 000
	6/8/98	JX00894	0 018	0 016	<0 001	0 060	0 054	0 148	0 000	<0 002	<0 007	0 001	0 001	0 002
	7/1/98	JX00944	0 008	0 060	0 350	0 001	0 005	0 424	0 000	0 001	0 005	0 000	0 000	0 006
	8/31/98	JX01015	0 001	0 006	0 063	<0 001	<0 001	0 070	0 000	0 000	0 001	<0 001	<0 001	0 001
	9/30/98	JX01029	0 015	0 230	0 960	<0 001	<0 001	1 205	0 000	<0 002	0 013	<0 001	<0 001	0 016

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
Post-Carbon	3/16/98	Discharge 2100-16	0 004	0 003	<0 00003	0 006	0 010	0 023	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	CD 0900-17	0 002	0 002	<0 00003	0 004	0 004	0 012	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/17/98	Discharge 2100	0 005	0 011	0 025	0 029	0 044	0 114	<0 001	<0 001	<0 001	<0 001	0 001	0 002
	3/18/98	CD-0900-18	0 003	0 002	<0 00003	0 004	0 004	0 013	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/18/98	Discharge-2100-18	0 003	0 002	<0 00003	0 003	0 007	0 015	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/19/98	CD-0900-19	0 006	0 730	1 700	1 900	4 200	8 536	<0 001	0 010	0 023	0 026	0 057	0 115
	3/19/98	Discharge-2100-19	0 005	0 005	0 004	0 009	0 014	0 037	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/20/98	CD-0900-20	<0 0002	<0 00006	<0 00003	0 001	0 002	0 003	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/21/98	Discharge106-0900-21	0 001	0 010	0 024	0 028	0 062	0 125	<0 001	<0 001	<0 001	<0 001	0 001	0 002
	3/22/98	Discharge106-0900-22	0 002	0 002	<0 00003	0 002	0 003	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/23/98	Discharge106-0900-23	0 003	0 002	<0 00003	0 001	0 003	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/24/98	CD106-1-0900-24	0 002	0 008	0 010	0 022	0 058	0 100	<0 001	<0 001	<0 001	<0 001	0 001	0 001
	3/25/98	CD-0900-25	0 009	0 007	0 008	0 018	0 040	0 082	<0 001	<0 001	<0 001	<0 001	0 001	0 001
	3/26/98	Discharge106-26-0900	0 013	0 001	<0 00003	<0 0001	0 003	0 017	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/27/98	SVE106-Discharge-0900-27	0 002	<0 00006	<0 00003	<0 0001	<0 00008	0 002	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/28/98	SVE106-Discharge-0900-28	0 004	<0 00006	<0 00003	<0 0001	<0 00008	0 004	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/30/98	SVE106-Discharge-0900-29	<0 002	<0 00006	<0 00003	0 002	0 007	0 009	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	3/31/98	JX00852	0 002	<0 00202	<0 00202	0 006	<0 00345	0 008	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	4/6/98	JAX106EFF	0 002	<0 00202	<0 00202	4 100	<0 00345	4 102	<0 001	<0 027	<0 027	<0 027	<0 047	0 055
	4/13/98	JAX863	<0 0013	<0 00202	<0 00202	<0 00273	<0 00345	0 000	<0 007	<0 007	<0 007	<0 007	<0 007	<0 001
	4/23/98	JX00878	0 002	<0 00202	<0 00202	<0 00273	<0 00345	0 002	0 000	<0 007	<0 007	<0 007	<0 007	<0 001
	4/27/98	JX00879	<0 00128	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	<0 007	<0 007	<0 007	<0 007	<0 007	<0 03
	5/4/98	JX00881	0 003	<0 00202	<0 00202	<0 00273	<0 00345	0 003	<0 001	<0 007	<0 007	<0 007	<0 007	<0 001
	5/11/98	JX00883	<0 0013	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	<0 001	<0 001	<0 001	<0 001	<0 001	<0 03
	5/18/98	JX00884	<0 0013	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	<0 001	<0 007	<0 007	<0 007	<0 007	<0 03
	5/27/98	JX00889	0 004	<0 00202	<0 00202	<0 00273	<0 00345	<0 0115	0 000	<0 009	<0 009	<0 009	<0 009	<0 03
	6/4/98	JX00891	0 009	0 003	<0 001	0 009	0 009	0 030	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	6/8/98	JX00893	0 006	<0 001	<0 001	0 002	0 006	< 0016	<0 001	<0 001	<0 001	<0 001	<0 001	<0 001
	6/17/98	JX00917	0 010	0 003	<0 001	0 004	0 005	<0 0023	0 000	0 000	<0 001	0 000	0 000	<0 001
	6/22/98	JX00932	0 050	0 006	<0 001	0 022	0 017	0 095	0 001	0 000	<0 001	0 000	0 000	0 001
	7/1/98	JX00943	0 008	<0 001	<0 001	0 006	0 006	<0 0023	0 000	<0 001	<0 001	0 000	0 000	<0 001

SOIL VAPOR EXTRACTION SYSTEM
PRE/POST TREATMENT OFF-GAS ANALYTICAL RESULTS
BUILDING 106
NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/m^3)						Mass Loading Rate (Pounds/Day)					
			Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	Total Chlorinated Ethenes (TCLE)	Vinyl Chloride	cis-1,2-DCE	trans-1,2-DCE	TCE	PCE	TCLE
Post-Carbon (cont'd)	7/7/98	JX00990	0 009	<0 001	<0 001	<0 001	0 001	<0 011	0 000	<0 001	<0 001	<0 001	0 000	<0 001
	7/14/98	JX00995	0 010	0 001	<0 001	0 002	0 003	0 016	0 000	0 000	<0 001	0 000	0 000	0 000
	7/20/98	JX01000	<0 001	0 001	0 003	<0 001	0 002	0 006	<0 001	0 000	0 000	<0 001	0 000	0 000
	7/29/98	JX01002	0 008	<0 001	0 041	<0 001	<0 001	0 049	0 000	<0 001	0 001	<0 001	<0 001	0 001
	8/4/98	JX01006	0 019	0 003	0 056	0 002	0 002	0 082	0 000	0 000	0 001	0 000	0 000	0 001
	8/10/98	JX01007	0 270	0 008	0 190	0 002	0 002	0 472	0 004	0 000	0 003	0 000	0 000	0 006
	8/20/98	JX01011	0 120	0 002	<0 001	0 004	0 003	0 129	0 002	0 000	<0 001	0 000	0 000	0 002
	8/27/98	JX01012	0 017	<0 001	<0 001	<0 001	<0 001	<0 017	0 000	<0 001	<0 001	<0 001	<0 001	<0 001
	8/31/98	JX01016	0 007	<0 001	<0 001	<0 001	<0 001	<0 008	0 000	<0 001	<0 001	<0 001	<0 001	<0 001
	9/3/98	JX01017	0 011	<0 001	<0 001	<0 001	<0 001	<0 013	0 000	<0 001	<0 001	<0 001	<0 001	<0 001
	9/10/98	JX01020	0 007	0 002	0 003	0 003	0 007	0 022	0 000	0 000	0 000	0 000	0 000	0 000
	9/17/98	JX01024	0 076	<0 001	<0 001	<0 001	<0 001	<0 080	0 001	<0 001	<0 001	<0 001	<0 001	0 001
	9/24/98	JX01025	0 091	<0 001	0 003	<0 001	<0 001	<0 098	0 001	<0 001	0 000	<0 001	<0 001	<0 001
	9/30/98	JX01030	0 029	<0 001	0 016	<0 001	<0 001	0 045	0 000	<0 001	0 000	<0 001	<0 001	0 001

ATTACHMENT C
SOIL VAPOR ANALYTICAL LABORATORY REPORTS

Columbia Analytical Services INC

October 12, 1998

Service Request No J9802480

Certification Numbers:

Florida DEP	930298G
Florida HRS	E82502; 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Bill Canelos
Bechtel Environmental Inc.
P O Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No.. NAS JAX. Building 106
Project Name: Weekly/Monthly Sampling

Dear Bill Canelos:

Enclosed are the results of the samples(s) submitted to our laboratory on October 06, 1998 For your reference. these analyses have been assigned our service request number J9802480

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly/Monthly Sampling / NAS JAX Building 106
Sample Matrix: Air

Service Request: J9802480
Date Collected: 9/30/98
Date Received: 10/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01027
Lab Code: J9802480-001
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	10/8/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	10/8/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	10/8/98	U	
Benzene	NONE	TO-15	1	1	1	NA	10/8/98	3	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	10/8/98	42	
Bromoform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	10/8/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	10/8/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	10/8/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	10/8/98	3	
Chloromethane	NONE	TO-15	1	1	1	NA	10/8/98	3	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	7	
cis-1,2-Dichloroethene	NONE	TO-15	25	1	25	NA	10/8/98	2600	
trans-1,2-Dichloroethene	NONE	TO-15	25	1	25	NA	10/8/98	5700	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	10/8/98	5	
Ethylbenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	10/8/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	10/8/98	U	
Styrene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	25	1	25	NA	10/8/98	12000	
Toluene	NONE	TO-15	1	1	1	NA	10/8/98	6	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichloroethene (TCE)	NONE	TO-15	25	1	25	NA	10/8/98	4100	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	10/8/98	3	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	10/8/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	10/8/98	31	
Total Xylenes	NONE	TO-15	2	2	1	NA	10/8/98	U	

Approved By: Tom D. Lessinger Date 10/12/98

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: Weekly/Monthly Sampling / NAS JAX Building 106
Sample Matrix: Air

Service Request: J9802480
Date Collected: 9/30/98
Date Received: 10/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01028
Lab Code: J9802480-002
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	10/8/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	10/8/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	10/8/98	U	
Benzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	10/8/98	2	
Bromoform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	10/8/98	2	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	10/8/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	10/8/98	2	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	10/8/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	10/8/98	4	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	110	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	100	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	10/8/98	6	
Ethylbenzene	NONE	TO-15	1	1	1	NA	10/8/98	42	
Methylene Chloride	NONE	TO-15	10	1	1	NA	10/8/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	10/8/98	U	
Styrene	NONE	TO-15	1	1	1	NA	10/8/98	660	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	10/8/98	540	
Toluene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	10/8/98	220	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	10/8/98	3	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	10/8/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	10/8/98	2	
Total Xylenes	NONE	TO-15	2	2	1	NA	10/8/98	190	

Approved By: Tam D Kissinger Date 10/12/98

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: Weekly Monthly Sampling / NAS JAX Building 106
Sample Matrix: Air

Service Request: J9802480
Date Collected: 9/30/98
Date Received: 10/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01029
Lab Code: J9802480-003
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	10/8/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	10/8/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	10/8/98	U	
Benzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	10/8/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	10/8/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	10/8/98	3	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	2	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	230	
trans-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	10/8/98	960	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	10/8/98	5	
Ethylbenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	10/8/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	10/8/98	U	
Styrene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	10/8/98	U	
Toluene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	10/8/98	2	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	10/8/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	10/8/98	15	
Total Xylenes	NONE	TO-15	2	2	1	NA	10/8/98	U	

Approved By Tam D. Kissinger Date 10/12/98

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly/Monthly Sampling / NAS JAX Building 106
Sample Matrix: Air

Service Request: J9802480
Date Collected: 9/30/98
Date Received: 10/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01030
Lab Code: J9802480-004
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	10/8/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	10/8/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	10/8/98	U	
Benzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	10/8/98	2	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	10/8/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	10/8/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	10/8/98	4	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	16	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	10/8/98	7	
Ethylbenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	10/8/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	10/8/98	U	
Styrene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	10/8/98	U	
Toluene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	10/8/98	4	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	10/8/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	10/8/98	29	
Total Xylenes	NONE	TO-15	2	2	1	NA	10/8/98	U	

Approved By: Tom D. Ilsinger Date 10/12/98

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: Weekly Monthly Sampling / NAS JAX Building 106
Sample Matrix: Air

Service Request: J9802480
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. Method Blank
Lab Code. J981008-MB
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	10/8/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	10/8/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	10/8/98	U	
Benzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	10/8/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	10/8/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	10/8/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	10/8/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	10/8/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	10/8/98	U	
Styrene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	10/8/98	U	
Toluene	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	10/8/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	10/8/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	10/8/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	10/8/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	10/8/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	10/8/98	U	

Approved By Tom D Kissinger Date 10/12/98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc
Project: Weekly/Monthly Sampling / NAS JAX Building 106
Sample Matrix: Air

Service Request: J9802480
Date Collected: 9/30/98
Date Received: 10/6/98
Date Extracted: NA
Date Analyzed: 10/8/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method NONE
Analysis Method TO-15

Units: PERCENT
Basis NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01027	J9802480-001		116	109	91
JX01028	J9802480-002		117	105	100
JX01029	J9802480-003		115	108	94
JX01030	J9802480-004		118	106	93
Method Blank	J981008-MB		112	107	94
Lab Control Sample	J981008-LCS		110	102	93
CAS Acceptance Limits			50-150	50-150	50-150

Approved By Tom D. Kissinger Date 10/12/98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc
Project: Weekly/Monthly Sampling / NAS JAX Building 106
LCS Matrix: Air

Service Request: J9802480
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 10/8/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code. J981008-LCS
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	25	125	50-150	
Benzene	NONE	TO-15	16	17	106	50-150	
Trichloroethene	NONE	TO-15	27	25	93	50-150	
Toluene	NONE	TO-15	19	19	100	50-150	
Chlorobenzene	NONE	TO-15	24	27	113	50-150	

Approved By Tom D. Kissinger Date. 10/12/98

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802480
Project: Weekly/Monthly Sampling / NAS JAX. Building 106
Cooler received on 10/6/98 and opened on 10/6/98 by KAH

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No: 26
Cooler/Crate No.: Summa Canisters
Sampling Event:: Weekly/Monthly Air Sampling

SEIR No: N/A
COC Number: JX 230
Lab: Columbia Analytical Services
Field Logbook No.: JX-CA-008
Logbook Pg. No: 47-50

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

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
106-1	JX01027	ENV	AIR	9-30-98 / 16:35	01	N/A		TO-15	5-day	C
106-2	JX01028			/ 16:40	01					
Int. GAC	JX01029			/ 16:45	01					
Post GAC	JX01030			/ 16:50	01					

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
WJ Canela	[illegible]	10/5/98	1515	

COMMENTS/INSTRUCTIONS

PO # 277-F-2689

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by CAS Lab

Ship to: Columbia Analytical Services 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

J9802480

O \NAVY-RAC \C(

Columbia Analytical Services INC.
An Employee-Owned Company

September 29, 1998

Service Request No. J9802401

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

W.J. Canelos
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No.: NAS Jax. Building 106
Project Name: Weekly Air Sampling

Dear W.J. Canelos:

Enclosed are the results of the samples(s) submitted to our laboratory on September 28, 1998. For your reference, these analyses have been assigned our service request number: J9802401

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

TK/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly Air Sampling / NAS Jax Building 106
Sample Matrix: Air

Service Request: J9802401
Date Collected: 9/24/98
Date Received: 9/28/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX 01025
Lab Code: J9802401-001
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/28/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/28/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/28/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/28/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/28/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/28/98	2	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	3	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/28/98	5	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/28/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/28/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/28/98	3	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/28/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/28/98	91	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/28/98	U	

Approved By: Tom D. Thissinger Date. 9/29/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly Air Sampling / NAS Jax. Building 106
Sample Matrix: Air

Service Request: J9802401
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980928-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/28/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/28/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/28/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/28/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/28/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/28/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/28/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/28/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/28/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/28/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/28/98	U	

Approved By: Tom D. Kissinger Date 9/29/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9802401
Project:	Weekly Air Sampling / NAS Jax Building 106	**Date Collected:**	9/24/98
Sample Matrix:	Air	**Date Received:**	9/28/98
		Date Extracted:	NA
		Date Analyzed:	9/28/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method.	NONE	Units:	PERCENT
Analysis Method.	TO-15	Basis:	NA

Sample Name	**Lab Code**	**Test Notes**	**Percent Recovery** 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX 01025	J9802401-001		119	100	91
Method Blank	J980928-MB		108	104	99
Lab Control Sample	J980928-LCS		105	101	100
CAS Acceptance Limits:			50-150	50-150	50-150

Approved By: Tom D. Kissinger Date: 9/29/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc.
Project: Weekly Air Sampling / NAS Jax Building 106
LCS Matrix: Air

Service Request: J9802401
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 9/28/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J980928-LCS
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	26	130	50-150	
Benzene	NONE	TO-15	16	19	119	50-150	
Trichloroethene	NONE	TO-15	27	27	100	50-150	
Toluene	NONE	TO-15	19	19	100	50-150	
Chlorobenzene	NONE	TO-15	24	28	117	50-150	

Approved By: Tom D. Kissinger Date: 9/29/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802401
Project: Weekly Air Sampling / NAS Jax. Building 106
Cooler received on 9/28/98 and opened on 9/28/98 by THT

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

Columbia Analytical Services INC
An Employee-Owned Company

September 28, 1998

Service Request No. J9802336

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

W. J. Canelos
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No.: Building 106
Project Name: NAS Jacksonville

Dear W. J. Canelos:

Enclosed are the results of the samples(s) submitted to our laboratory on September 21, 1998. For your reference. these analyses have been assigned our service request number: J9802336

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

TK/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No.: 26
Cooler/Crate No.: Summa # Entech 02459
Sampling Event:: Weekly Air Sampling

SEIR No.: N/A
COC Number: JX228
Lab. Columbia Analytical Services
Field Logbook No: JX-VA-008
Logbook Pg No: 46

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

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JX01025	ENV	AIR	9-24-98/16:40	01	N/A		TO-15	5-day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
	[illegible]	9/28/98	0840	

COMMENTS/INSTRUCTIONS

PO # 277-F-2689

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by CAS Lab
Ship to: Columbia Analytical Services Lab

J9802401.

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

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802336
Date Collected: 9/17/98
Date Received: 9/21/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01024
Lab Code: J9802336-001
Test Notes.

Units: ug/m3
Basis. NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/28/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/28/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/28/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/28/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/28/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/28/98	2	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/28/98	5	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/28/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/28/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/28/98	2	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/28/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/28/98	76	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/28/98	U	

Approved By: Tom D. Ussinger Date: 9/28/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802336
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980928-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/28/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/28/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/28/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/28/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/28/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/28/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/28/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/28/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/28/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/28/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/28/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/28/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/28/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/28/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/28/98	U	

Approved By: Tom D. Ilsinger Date: 9/28/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802336
Project:	NAS Jacksonville / Building 106	**Date Collected:**	9/17/98
Sample Matrix:	Air	**Date Received:**	9/21/98
		Date Extracted:	NA
		Date Analyzed:	9/28/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method: NONE
Analysis Method: TO-15

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluor
JX01024	J9802336-001		116	101	92
Method Blank	J980928-MB		108	104	99
Lab Control Sample	J980928-LCS		105	101	100
CAS Acceptance Limits:			50-150	50-150	50-15

Approved By: Tan D. Lissinger Date. 9/28/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
LCS Matrix: Air

Service Request: J9802336
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 9/28/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J980928-LCS
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	26	130	50-150	
Benzene	NONE	TO-15	16	19	119	50-150	
Trichloroethene	NONE	TO-15	27	27	100	50-150	
Toluene	NONE	TO-15	19	19	100	50-150	
Chlorobenzene	NONE	TO-15	24	28	117	50-150	

Approved By: Tom D. Kissinger Date 9/28/98

LCS/52595

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No.: 26
Cooler/Crate No.: Summa # ENTECH 02460
Sampling Event:: Weekly Air Sampling

SEIR No. N/A
COC Number JX 227
Lab Columbia Analytical Services
Field Logbook No.: JX-OA-008
Logbook Pg No: 45

Sampled by W. J. Canelos (Print) WJ Canelos (Sign) _____ (Print) _____ (Sign)

Legend

SAMPLE TYPE

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

MATRIX

- AIR Air
- FLO Flora
- FAU Fauna
- GWT Groundwater
- LCH Leachate
- OIL Oil
- DIW Deionized Water
- DFW Deionized Organic Free Water
- SBS Subsurface Soil
- SED Sediment
- SFS Surface Soil
- SFW Surface Water
- SLG Sludge
- SLW Solid Waste
- OFW Organic Free Water
- PTW Potable Water
- SEP Seeps
- SOL Solid
- WWT Waste Water
- SLW Solid Waste
- SST Surface Water Storm Event

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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JX01024	ENV	AIR	9-17-98/14:30	01	N/A		TO-15	5-day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
	K. [illegible]	9/21/98	1315	

COMMENTS/INSTRUCTIONS

PO# 277-F-2689

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by CAS Lab

Ship to Columbia Analytical Services 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

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802336

Project: NAS Jacksonville / Building 106

Cooler received on 9/21/98 and opened on 9/21/98 by KAH

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt		_____ Degrees C	

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

Columbia Analytical Services INC

September 15, 1998

Service Request No. J9802289

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502; 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A; 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

W J. Canelos
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No Building 106
Project Name: NAS Jacksonville

Dear W.J. Canelos:

Enclosed are the results of the samples(s) submitted to our laboratory on September 14, 1998. For your reference, these analyses have been assigned our service request number: J9802289

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jm

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802289
Date Collected: 9/10/98
Date Received: 9/14/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01020
Lab Code: J9802289-001
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/15/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/15/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/15/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/15/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/15/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/15/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/15/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/15/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/15/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/15/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/15/98	2	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/15/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/15/98	2	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/15/98	3	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/15/98	7	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/15/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/15/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/15/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/15/98	12	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/15/98	7	
Toluene	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/15/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/15/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/15/98	3	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/15/98	3	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/15/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/15/98	7	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/15/98	2	

Approved By: Tom D. Kissinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802289
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980914-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tam D Kissinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802289
Project:	NAS Jacksonville / Building 106	**Date Collected:**	9/10/98
Sample Matrix:	Air	**Date Received:**	9/14/98
		Date Extracted:	NA
		Date Analyzed:	9/14-15/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method: NONE
Analysis Method: TO-15

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01020	J9802289-001		115	106	94
Method Blank	J980914-MB		102	111	95
Lab Control Sample	J980914-LCS		104	104	94
CAS Acceptance Limits.			50-150	50-150	50-150

Approved By: Tom D. Kissinger Date 9/15/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802289
Project:	NAS Jacksonville / Building 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	9/14/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name:	Lab Control Sample	Units:	ug/m3
Lab Code:	J980914-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	20	100	50-150	
Benzene	NONE	TO-15	16	15	94	50-150	
Trichloroethene	NONE	TO-15	27	22	81	50-150	
Toluene	NONE	TO-15	19	16	84	50-150	
Chlorobenzene	NONE	TO-15	24	22	92	50-150	

Approved By: Tom D. Kissinger Date. 9/15/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802289
Project: NAS Jacksonville / Building 106.
Cooler received on 9/14/98 and opened on 9/14/98 by KAH

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No.: 26
Cooler/Crate No.: Summa # ENTECH 02455
Sampling Event:: Weekly Air Sampling

SEIR No: N/A
COC Number: JX225
Lab. Columbia Analytical Services
Field Logbook No: JX-OA-008
Logbook Pg No.. 44

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	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JA01020	ENV	AIR	9-10-98/16:25	01	N/A		TO-15	5-day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W J Canelos	[illegible]	9/14/98	1440	

COMMENTS/INSTRUCTIONS

Use August 1998 PO #

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper: Pick-up by CAS Lab

Ship to: Columbia Analytical Services 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

Columbia Analytical Services INC
An Employee-Owned Company

September 15, 1998

Service Request No. J9802255

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

W.J. Canelos
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No.: Building 106
Project Name: NAS Jacksonville

Dear W.J. Canelos:

Enclosed are the results of the samples(s) submitted to our laboratory on September 09, 1998. For your reference, these analyses have been assigned our service request number: J9802255

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted.

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

TK/jm

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802255
Date Collected: 9/3/98
Date Received: 9/9/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01017
Lab Code: J9802255-001
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	4	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	2	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	11	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tom D. Hessinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802255
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980914-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tom D. Hussinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802255
Project:	NAS Jacksonville / Building 106	**Date Collected:**	9/3/98
Sample Matrix:	Air	**Date Received:**	9/9/98
		Date Extracted:	NA
		Date Analyzed:	9/14/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method NONE
Analysis Method. TO-15

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01017	J9802255-001		107	109	97
Method Blank	J980914-MB		102	111	95
Lab Control Sample	J980914-LCS		104	104	94
CAS Acceptance Limits			50-150	50-150	50-150

Approved By: Tom D. Lissinger Date 9/15/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802255
Project:	NAS Jacksonville / Building 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	9/14/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name:	Lab Control Sample	Units:	ug/m3
Lab Code.	J980914-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	20	100	50-150	
Benzene	NONE	TO-15	16	15	94	50-150	
Trichloroethene	NONE	TO-15	27	22	81	50-150	
Toluene	NONE	TO-15	19	16	84	50-150	
Chlorobenzene	NONE	TO-15	24	22	92	50-150	

Approved By: Tam D. Plessinger Date 9/15/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802255
Project: NAS Jacksonville / Building 106
Cooler received on 9/9/98 and opened on 9/9/98 by KAH

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No.: 26
Cooler/Crate No.: Summa
Sampling Event:: Weekly Air Sampling

SEIR No N/A
COC Number. JX723
Lab. Columbia Analytical Services
Field Logbook No : JX-CA-008
Logbook Pg No 43

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	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JX01017	ENV	AIR	9-3-98/8:00	01	N/A	P.O.	TO-15	5-day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W.J Canelos	K. [illegible]	9/9/98	0825	

COMMENTS/INSTRUCTIONS

Use August 1998 P.O. #

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by CAS Lab

Ship to.

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

Columbia Analytical Services INC
An Employee-Owned Company

September 15, 1998

Service Request No. J9802254

Certification Numbers:

Florida DEP:	930298G
Florida HRS.	E82502. 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A; 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

W.J. Canelos
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No.: Building 106
Project Name: NAS Jacksonville

Dear W.J. Canelos:

Enclosed are the results of the samples(s) submitted to our laboratory on September 09. 1998. For your reference. these analyses have been assigned our service request number J9802254

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jm

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802254
Date Collected: 8/31/98
Date Received: 9/9/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01013
Lab Code. J9802254-001
Test Notes:

Units. ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	11	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	2	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	640	
trans-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	9/15/98	4300	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	2	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	10	1	10	NA	9/15/98	14000	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	10	1	10	NA	9/15/98	3800	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	5	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tan D. Kissinger Date. 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802254
Date Collected: 8/31/98
Date Received: 9/9/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01014
Lab Code: J9802254-002
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	1	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	64	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	82	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	4	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	1	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	330	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	130	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	2	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tom D. Kissinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802254
Date Collected: 8/31/98
Date Received: 9/9/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01015
Lab Code: J9802254-003
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	6	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	63	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	1	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	1	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tom D. Kissinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802254
Date Collected: 8/31/98
Date Received: 9/9/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01016
Lab Code J9802254-004
Test Notes:

Units ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	2	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	6	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	2	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	7	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tom D. Kissinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9802254
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code. J980914-MB
Test Notes:

Units: ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/14/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/14/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/14/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/14/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/14/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/14/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/14/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/14/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/14/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/14/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/14/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/14/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/14/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/14/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/14/98	U	

Approved By: Tom D. Lissinger Date 9/15/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802254
Project:	NAS Jacksonville / Building 106	**Date Collected:**	8/31/98
Sample Matrix:	Air	**Date Received:**	9/9/98
		Date Extracted:	NA
		Date Analyzed:	9/14/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method. NONE
Analysis Method: TO-15

Units. PERCENT
Basis. NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01013	J9802254-001		106	107	91
JX01014	J9802254-002		110	108	94
JX01015	J9802254-003		105	106	97
JX01016	J9802254-004		112	105	95
Method Blank	J980914-MB		102	111	95
Lab Control Sample	J980914-LCS		104	104	94
CAS Acceptance Limits			50-150	50-150	50-150

Approved By: Tom D. Kissinger Date 9/15/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9802254
Project:	NAS Jacksonville / Building 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	9/14/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name:	Lab Control Sample	Units:	ug/m3
Lab Code:	J980914-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	20	100	50-150	
Benzene	NONE	TO-15	16	15	94	50-150	
Trichloroethene	NONE	TO-15	27	22	81	50-150	
Toluene	NONE	TO-15	19	16	84	50-150	
Chlorobenzene	NONE	TO-15	24	22	92	50-150	

Approved By: Tom D. Thissing Date: 9/15/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802254
Project: NAS Jacksonville / Building 106
Cooler received on 9/9/98 and opened on 9/9/98 by KAH

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No.: 26
Cooler/Crate No.: N/A (Summaqs)
Sampling Event:: Monthly Air Sampling

SEIR No: N/A
COC Number: JX222
Lab: Columbia Analytical Services
Field Logbook No.: JX-GA-008
Logbook Pg. No: 39-42

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	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
106-1	JX01013	ENV	AIR	8-31-98/ 17:05	01	N/A	P.O.	TO-15	5-day	C
106-2	JX01014	↓	↓	↓ 17:10	01	↓	↓	↓	↓	↓
Bet. GAC	JX01015	↓	↓	↓ 17:15	01	↓	↓	↓	↓	↓
Post GAC	JX01016	↓	↓	↓ 17:20	01	↓	↓	↓	↓	↓

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W J Canales	K. [illegible]	9/9/98	0825	

COMMENTS/INSTRUCTIONS

Use August 1998 P.O. #

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by CAS Lab

Ship to

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

J9802254

O:\NAVY-RAC\C

14968 -

Columbia Analytical Services INC
An Employee-Owned Company

September 8, 1998

Service Request No. J9802208

Certification Numbers:

Florida DEP	930298G
Florida HRS	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A; 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc
P O Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE. Project No . --
Project Name. NAS Jax(Building 106)

Dear Dane Cutshaw

Enclosed are the results of the samples(s) submitted to our laboratory on September 01, 1998. For your reference, these analyses have been assigned our service request number: J9802208

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

TK/jm

3540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-22[illegible]

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jax(Building 106)
Sample Matrix: Air

Service Request: J9802208
Date Collected: 8/27/98
Date Received: 9/1/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name JX01012
Lab Code J9802208-001
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/1/98	92	
Acrolein	NONE	TO-15	10	5	1	NA	9/1/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/1/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/1/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/1/98	19	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/1/98	41	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/1/98	6	
Chloromethane	NONE	TO-15	1	1	1	NA	9/1/98	17	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/1/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/1/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/1/98	2	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/1/98	36	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/1/98	32	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/1/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/1/98	38	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/1/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/1/98	5	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/1/98	19	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/1/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/1/98	4	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/1/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/1/98	17	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/1/98	140	

Approved By Tom D. Kissinger Date 9/8/98

1544052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jax(Building 106)
Sample Matrix: Air

Service Request: J9802208
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980901-MB
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	9/1/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	9/1/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	9/1/98	U	
Benzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	9/1/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	9/1/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	9/1/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	9/1/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	9/1/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/1/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	9/1/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	9/1/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	9/1/98	U	
Styrene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	9/1/98	U	
Toluene	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	9/1/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	9/1/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	9/1/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	9/1/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	9/1/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	9/1/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	9/1/98	U	

Approved By: Tam D. Kissinger Date 9/8/98

1S44'052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9802208
Project:	NAS Jax(Building 106)	**Date Collected:**	8/27.98
Sample Matrix:	Air	**Date Received:**	9/1 '98
		Date Extracted:	NA
		Date Analyzed:	9/1.98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01012	J9802208-001		103	117	97
Method Blank	J980901-MB		114	116	94
Lab Control Sample	J980901-LCS		113	113	100
CAS Acceptance Limits			50-150	50-150	50-150

Approved By Tom D. Kissinger Date 9/8/98

SOR3 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9802208
Project:	NAS Jax(Building 106)	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	9/1/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name.	Lab Control Sample	Units:	ug/m3
Lab Code	J980901-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	22	110	50-150	
Benzene	NONE	TO-15	16	17	106	50-150	
Trichloroethene	NONE	TO-15	27	26	96	50-150	
Toluene	NONE	TO-15	19	19	100	50-150	
Chlorobenzene	NONE	TO-15	24	19	79	50-150	

Approved By Tom D. Cassinge Date. 9/8/98

LCS.52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802208
Project: NAS Jax(Building 106) / --
Cooler received on 9/1/98 and opened on 9/1/98 by KAH

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Building 106
Delivery Order No.: 26
Cooler/Crate No.: N/A
Sampling Event:: Weekly Post GAC

SEIR No: N/A
COC Number: JX221
Lab: Columbia Analytical Services
Field Logbook No: JX-PA-008
Logbook Pg No: 38

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	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JX01012	ENVR	Air	8/27/98 / 16:45	01	N/A	—	TO 14	5-day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W J Canelos	[signature]	9/1/98	0955	

COMMENTS/INSTRUCTIONS

Previous P.O. By Dane Cutshaw For Month of August

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper: Pick-up by CAS Lab

Ship to: _____

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

Columbia Analytical Services INC
An Employee-Owned Company

August 26, 1998

Service Request No. J9802145

Certification Numbers:

Florida DEP:	930298G
Florida HRS:	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A; 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE. Project No Building 106
Project Name. NAS Jacksonville

Dear Dane Cutshaw:

Enclosed are the results of the samples(s) submitted to our laboratory on August 25, 1998. For your reference, these analyses have been assigned our service request number: J9802145.

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jm

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville Building 106
Sample Matrix: Air

Service Request: J9802145
Date Collected: 8/20/98
Date Received: 8/25/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX 01011
Lab Code: J9802145-001
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/25/98	340	
Acrolein	NONE	TO-15	10	5	1	NA	8/25/98	1100	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/25/98	14	
Benzene	NONE	TO-15	1	1	1	NA	8/25/98	3	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/25/98	3	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/25/98	50	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/25/98	110	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/25/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/25/98	3	
Chloroform	NONE	TO-15	1	1	1	NA	8/25/98	14	
Chloromethane	NONE	TO-15	1	1	1	NA	8/25/98	77	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	1	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	2	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	2	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/25/98	9	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/25/98	100	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/25/98	90	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/25/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/25/98	370	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/25/98	3	
Toluene	NONE	TO-15	1	1	1	NA	8/25/98	13	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/25/98	50	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	1	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/25/98	4	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/25/98	13	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/25/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/25/98	120	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/25/98	450	

Approved By Tom D. Kissinger Date 8/26/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville Building 106
Sample Matrix: Air

Service Request: J9802145
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980825-MB
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/25/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	8/25/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/25/98	U	
Benzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/25/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/25/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/25/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/25/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/25/98	U	
Toluene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/25/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/25/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/25/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/25/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/25/98	U	

Approved By: Tom D. Kissinger Date: 8/26/98

1S44 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9802145
Project:	NAS Jacksonville Building 106	**Date Collected:**	8/20/98
Sample Matrix:	Air	**Date Received:**	8/25/98
		Date Extracted:	NA
		Date Analyzed:	8/25/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX 01011	J9802145-001		106	105	105
Method Blank	J980825-MB		100	109	93
Lab Control Sample	J980825-LCS		99	105	100
CAS Acceptance Limits:			50-150	50-150	50-150

Approved By Tom D. Lissinger Date 8/26/98

SUR3 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9802145
Project:	NAS Jacksonville / Building 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	8/25/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name	Lab Control Sample	Units:	ug/m3
Lab Code	J980825-LCS	Basis:	NA
Test Notes			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	21	105	50-150	
Benzene	NONE	TO-15	16	16	100	50-150	
Trichloroethene	NONE	TO-15	27	26	96	50-150	
Toluene	NONE	TO-15	19	18	95	50-150	
Chlorobenzene	NONE	TO-15	24	19	79	50-150	

Approved By Tom D. Ihssinger Date 8/26/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802145
Project: NAS Jacksonville / Building 106
Cooler received on 8/25/98 and opened on 8/25/98 by wk

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

BECHTEL

Facility Name: NAS Jacksonville.
Site Name: Building 106
Delivery Order No.: 2-6
Cooler/Crate No.: N/A
Sampling Event:: Weekly Post GAC

SEIR No: N/A
COC Number: JX220
Lab: Columbia Analytical Services
Field Logbook No.: JX-DA-008
Logbook Pg. No.: 37

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

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JX01011	ENV	AIR	8-20-98/1235	C1	N/A	N/A	TO-14	5 day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
WJ Canelos	Walter Kraus	8/25/98	12:38	

COMMENTS/INSTRUCTIONS

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper: P/U by CAS Lab

Ship to: J9802145

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

Columbia
Analytical
Services INC

August 26, 1998

Service Request No J9802097

Certification Numbers:

Florida DEP	930298G
Florida HRS	E82502, 82483
Massachusetts	M-FL937
New Hampshire.	294297-A, 294297-B
North Carolina	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc
P O Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Bldg 106
Project Name Weekly Post GAC

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on August 19, 1998 For your reference, these analyses have been assigned our service request number J9802097

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jg

3540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ 904 739-2277 ▪ Fax 904 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly Post GAC Bldg 106
Sample Matrix: Air

Service Request: J9802097
Date Collected: 8/10/98
Date Received: 8/19/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name JX 1007
Lab Code J9802097-001
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/25/98	65	
Acrolein	NONE	TO-15	10	5	1	NA	8/25/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/25/98	U	
Benzene	NONE	TO-15	1	1	1	NA	8/25/98	2	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/25/98	3	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/25/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/25/98	3	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/25/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/25/98	1	
Chloroform	NONE	TO-15	1	1	1	NA	8/25/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	8/25/98	4	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	5	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	8	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	190	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/25/98	11	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/25/98	1	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/25/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/25/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	2	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/25/98	2	
Toluene	NONE	TO-15	1	1	1	NA	8/25/98	2	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/25/98	2	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	2	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/25/98	2	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/25/98	7	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/25/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/25/98	270	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/25/98	6	

Approved By Tom D. Kissinger Date. 8/26/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly Post GAC Bldg 106
Sample Matrix: Air

Service Request: J9802097
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980825-MB
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/25/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	8/25/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/25/98	U	
Benzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/25/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/25/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/25/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	8/25/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/25/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/25/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/25/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/25/98	U	
Toluene	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/25/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/25/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/25/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/25/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/25/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/25/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/25/98	U	

Approved By Tom D. Kissinger Date 8/26/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9802097
Project:	Weekly Post GAC Bldg 106	**Date Collected:**	8/10/98
Sample Matrix:	Air	**Date Received:**	8/19/98
		Date Extracted:	NA
		Date Analyzed:	8/25/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units.	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX 1007	J9802097-001		97	110	93
Method Blank	J980825-MB		100	109	93
Lab Control Sample	J980825-LCS		99	105	100
CAS Acceptance Limits.			50-150	50-150	50-150

Approved By Tom D. Ilsinger Date 8/26/98

SUR3 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc.
Project: Weekly Post GAC / Bldg 106
LCS Matrix: Air

Service Request: J9802097
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 8/25/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J980825-LCS
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	21	105	50-150	
Benzene	NONE	TO-15	16	16	100	50-150	
Trichloroethene	NONE	TO-15	27	26	96	50-150	
Toluene	NONE	TO-15	19	18	95	50-150	
Chlorobenzene	NONE	TO-15	24	19	79	50-150	

Approved By: Tom D. Ihssinger Date: 8/26/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802097
Project: Weekly Post GAC / Bldg 106
Cooler received on 8/19/98 and opened on 8/19/98 by tht

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

Facility Name: NAS Jacksonville
Site Name: Bldg 106
Delivery Order No.:
Cooler/Crate No.:
Sampling Event.: Weekly Post GAC

SEIR No
COC Number: 217
Lab
Field Logbook No:
Logbook Pg. No.:

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (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
Post GAC	JX1007	ENV	AIR	8-10-98/1135	-01	—	NA	TO-14	5-Day	NA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	[illegible]	8/19/98	1039	Transfer to Lab

COMMENTS/INSTRUCTIONS

please call for P.O.
779-8900

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper

Ship to

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

J9802097

Columbia
Analytical
Services INC

August 11, 1998

Service Request No. J9801984

Certification Numbers

Florida DEP	930298G
Florida HRS	E82502, 82483
Massachusetts:	M-FL937
New Hampshire.	294297-A, 294297-B
North Carolina.	527
South Carolina.	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc
P O Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No. NAS JAX/BEI Bldg 106
Project Name: Weekly Post GAC

Dear Dane Cutshaw

Enclosed are the results of the sample(s) submitted to our laboratory on August 5, 1998 For your reference, these analyses have been assigned our service request number: J9801984

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions

Respectfully submitted,

Columbia Analytical Services, Inc.

for Tom Kissinger
Jerry Allen
Project Chemist

JA/jg

8540 Concentec Rd ▪ Jacksonville FL 32256 ▪ 904 739-2277 ▪ Fax 904 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: Weekly Post GAC NAS Jax/BEI Bldg 106
Sample Matrix: Air

Service Request: J9801984
Date Collected: 8/4 98
Date Received: 8/5 98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name JX01006
Lab Code J9801984-001
Test Notes

Units ug m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/10/98	53	
Acrolein	NONE	TO-15	10	5	1	NA	8/10/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/10/98	U	
Benzene	NONE	TO-15	1	1	1	NA	8/10/98	1	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/10/98	3	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/10/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/10/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/10/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/10/98	2	
Chloroform	NONE	TO-15	1	1	1	NA	8/10/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	8/10/98	6	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	1	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	4	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	3	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	56	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/10/98	13	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/10/98	2	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/10/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/10/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/10/98	2	
Toluene	NONE	TO-15	1	1	1	NA	8/10/98	2	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/10/98	2	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/10/98	2	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/10/98	6	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/10/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/10/98	19	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/10/98	3	

Approved By Tom D. Lissinger Date 8/11/98

1844 052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: Weekly Post GAC NAS Jax BEI Bldg 106
Sample Matrix: Air

Service Request: J9801984
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980810-MB
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/10/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	8/10/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/10/98	U	
Benzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/10/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/10/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/10/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/10/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/10/98	U	
Toluene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/10/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/10/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/10/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/10/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/10/98	U	

Approved By: Tom D. Kissinger Date: 8/11/98

1S11052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801984
Project:	Weekly Post GAC NAS Jax BEI Bldg 106	**Date Collected:**	8/4/98
Sample Matrix:	Air	**Date Received:**	8/5/98
		Date Extracted:	NA
		Date Analyzed:	8/10/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01006	J9801984-001		106	109	91
Method Blank	J980810-MB		100	109	93
Lab Control Sample	J980810-LCS		99	105	100
CAS Acceptance Limits			50-150	50-150	50-150

Approved By Tom D. Lessinger Date 8/11/98

SUR3 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801984
Project:	Weekly Post GAC / NAS Jax/BEI Bldg 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	8/10/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name	Lab Control Sample	Units:	ug/m3
Lab Code	J980810-LCS	Basis:	NA
Test Notes			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	21	105	50-150	
Benzene	NONE	TO-15	16	16	100	50-150	
Trichloroethene	NONE	TO-15	27	26	96	50-150	
[illegible]ne	NONE	TO-15	19	18	95	50-150	
Chlorobenzene	NONE	TO-15	24	19	79	50-150	

Approved By Tom D. Kissinger Date 8/11/98

LCS 52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801984
Project: Weekly Post GAC / NAS JAX/BEI Bldg. 106
Cooler received on 8/5/98 and opened on 8/5/98 by kah

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

Facility Name: NAS Jacksonville / BEI	SEIR No:
Site Name: Bldg 1016	COC Number: 215
Delivery Order No.:	Lab:
Cooler/Crate No.:	Field Logbook No:
Sampling Event:: Weekly Post GAC	Logbook Pg. No.:

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (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
PostGAC	JK01006	ENV	AIR	8-4-98 / 1310	01	—	NA	TO-14	5-Day	NA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	K [illegible]	8-5-98	1005	tranfer to lab

COMMENTS/INSTRUCTIONS

Please call for PO #
(779-8900)

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper: _____

Ship to: J98 01984

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

Columbia
Analytical
Services

August 11 1998

Service Request No J9801982

Certification Numbers

Florida DEP	930298C
Florida HRS	E82502, N2483
Massachusetts	M-FL937
New Hampshire	294297-A [illegible]
North Carolina	527
South Carolina	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc
P O Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No NAS Jax/BEI Bldg 106
Project Name Weekly Post GAC

Dear Dane Cutshaw

Enclosed are the results of the sample(s) submitted to our laboratory on August 5 1998 For your reference, these analyses have been assigned our service request number J9801982

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc (CAS) is not responsible for use of less than the complete report Results apply only to the samples analyzed

Please call if you have any questions

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Hissinger

for Jerry Allen
Project Chemist

JA/jg

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: Weekly Post GAC NAS Jax BEI Bldg 106
Sample Matrix: Air

Service Request: J9801982
Date Collected: 7 29 98
Date Received: 8 5 98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01002
Lab Code: J9801982-001
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8 10 98	[illegible]	
Acrolein	NONE	TO-15	10	5	1	NA	8/10 98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8 10 98	U	
Benzene	NONE	TO-15	1	1	1	NA	8 10 98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8 10 98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8 10 98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8 10 98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/10 98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/10 98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8 10 98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/10 98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/10 98	U	
Chloroform	NONE	TO-15	1	1	1	NA	8/10 98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	8 10 98	9	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8 10 98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8 10 98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8 10 98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8 10/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	3	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	41	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/10 98	9	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/10/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/10 98	U	
Styrene	NONE	TO-15	1	1	1	NA	8 10 98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8 10 98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10 98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8 10 98	U	
Toluene	NONE	TO-15	1	1	1	NA	8 10 98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/10 98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/10 98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/10 98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	8/10/98	5	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/10/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/10/98	8	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/10/98	6	

Approved By: Tom D. Hassinger Date: 8/11/98

IS11052598

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Beentel Environmental Inc
Project: Weekly Post GAC NAS Jax BLI Bldg 706
Sample Matrix: Air

Service Request: J9806182
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J9806182-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	8/10/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	8/10/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	8/10/98	U	
Benzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	8/10/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	8/10/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	8/10/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	8/10/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	8/10/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	8/10/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	8/10/98	U	
Styrene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	8/10/98	U	
Toluene	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	8/10/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	8/10/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	8/10/98	U	
Trichlorofluoromethane (CFC	NONE	TO-15	1	1	1	NA	8/10/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	8/10/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	8/10/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	8/10/98	U	

Approved By: Tom D. Ussinger Date: 8/11/98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801982
Project:	Weekly Post GAC NAS Jax BEI Bldg 106	**Date Collected:**	7 29 98
Sample Matrix:	Air	**Date Received:**	8 5 98
		Date Extracted:	NA
		Date Analyzed:	8 10 98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
JX01002	J9801982-001		105	109	[illegible]
Method Blank	J980810-MB		100	109	93
Lab Control Sample	J980810-LCS		99	105	100
		CAS Acceptance Limits	50-150	50-150	50-150

Approved By Tom D. Hessinger Date 8/11/98

SUR3 052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc.
Project: Weekly Post G.A.C. NAS Jax/BLI Bldg
LCS Matrix: Air

Service Request: J9801982
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 8/10/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J980810-LCS
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	21	105	50-150	
Benzene	NONE	TO-15	16	16	100	50-150	
Trichloroethene	NONE	TO-15	27	26	96	50-150	
Toluene	NONE	TO-15	19	18	95	50-150	
Chlorobenzene	NONE	TO-15	24	19	79	50-150	

Approved By: Tom D. Hessinger Date: 8/11/98

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801982
Project: Weekly Post GAC / NAS Jax/BEI Bldg. 106
Cooler received on 8/5/98 and opened on 8/5/98 by jmg

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

Facility Name NAS Jacksonville / BEI
Site Name Bldg. 1016
Delivery Order No
Cooler/Crate No.
Sampling Event: Weekly Post GAC

SEIR No
COC Number 213
Lab
Field Logbook No.
Logbook Pg. No.

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (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
Weekly Post GAC	JX01002	ENV	AIR	7-29-98 / 1610	01	—	NA	TO-15	5-Day	NA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	K. [illegible]	7-29-98	1005	

COMMENTS/INSTRUCTIONS

PO 277-CC-2608
JX801982

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper

Ship to

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

Columbia Analytical Services INC
An Employee-Owned Company

July 31, 1998

Service Request No. J9801876

Certification Numbers:

Florida DEP	930298G
Florida HRS.	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No. Bldg 106/Weekly Post GAC
Project Name: NAS Jacksonville/BEI

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on JULY 24, 1998 For your reference, these analyses have been assigned our service request number: J9801876

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jerry Allen
Project Chemist

JA/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739-2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville/BEI, Bldg 106/Weekly Post GAC
Sample Matrix: Air

Service Request: J9801876
Date Collected: 7/20/98
Date Received: 7/24/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX1000
Lab Code: J9801876-001
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/30/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/30/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/30/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/30/98	2	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/30/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/30/98	2	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/30/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/30/98	8	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/30/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/30/98	3	
Chloroform	NONE	TO-15	1	1	1	NA	7/30/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	7/30/98	7	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/30/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/30/98	1	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/30/98	3	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/30/98	8	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/30/98	2	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/30/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/30/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/30/98	2	
Toluene	NONE	TO-15	1	1	1	NA	7/30/98	2	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/30/98	2	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/30/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/30/98	6	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/30/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/30/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/30/98	8	

Approved By: _____ Date 7/31/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville/BEI / Bldg.106/Weekly Post GAC
Sample Matrix: Air

Service Request: J9801876
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980730-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/30/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/30/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/30/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/30/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/30/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/30/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/30/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/30/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/30/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/30/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/30/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/30/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/30/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/30/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/30/98	U	
Toluene	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/30/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/30/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/30/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/30/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/30/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/30/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/30/98	U	

Approved By: _____ Date 7/31/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801876
Project:	NAS Jacksonville/BEI / Bldg 106/Weekly Post GAC	**Date Collected:**	7/20/98
Sample Matrix:	Air	**Date Received:**	7/24/98
		Date Extracted:	NA
		Date Analyzed:	7/30/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	**Lab Code**	**Test Notes**	**Percent Recovery** 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX1000	J9801876-001		109	114	92
Method Blank	J980730-MB		103	112	89
Lab Control Sample	J980730-LCS		106	109	95
CAS Acceptance Limits			50-150	50-150	50-150

Approved By: _____ Date 7/31/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801876
Project:	NAS Jacksonville/BEI / Bldg 106/Weekly Post GAC	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	7/30/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample — Units: ug/m3

Lab Code: J980730-LCS — Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	25	125	50-150	
Benzene	NONE	TO-15	16	19	119	50-150	
Trichloroethene	NONE	TO-15	27	30	111	50-150	
Toluene	NONE	TO-15	19	22	116	50-150	
Chlorobenzene	NONE	TO-15	24	22	92	50-150	

Approved By: _____ Date: 7/31/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801876
Project: NAS Jacksonville/BEI / Bldg.106/Weekly Post GAC
Cooler received on 7/24/98 and opened on 7/24/98 by jmg

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville / BEI
Site Name: Bldg. 106 / Weekly Post GAC
Delivery Order No.:
Cooler/Crate No.:
Sampling Event:: Weekly Post GAC

SEIR No
COC Number: 212
Lab
Field Logbook No :
Logbook Pg. No.:

Sampled by. Dane Cutshaw (Print) Dane Cutshaw (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
Post GAC	~~[illegible]~~	ENV	AIR	7-20-98/1530	-01	—	NA	TO-15	5 Day	NA
	3X1000									

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	K. [illegible]	7-23-98	1630	

COMMENTS/INSTRUCTIONS
PO 217-CC-2608

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper
Ship to

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

J9801876

Columbia Analytical Services Inc.
An Employee-Owned Company

July 23, 1998

Service Request No J9801784

Certification Numbers:

Florida DEP:	930298G
Florida HRS.	E82502, 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No. Bldg 106
Project Name: BEI/NAS Jacksonville

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on July 16, 1998 For your reference, these analyses have been assigned our service request number: J9801784

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ 800-695-7222 ▪ Fax 904-739-2

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: BEI/NAS Jacksonville / Bldg 106
Sample Matrix: Air

Service Request: J9801784
Date Collected: 7/14/98
Date Received: 7/16/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. JX00995
Lab Code J9801784-001
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/22/98	110	
Acrolein	NONE	TO-15	10	5	1	NA	7/22/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/22/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/22/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/22/98	3	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/22/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/22/98	7	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/22/98	3	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/22/98	2	
Chloroform	NONE	TO-15	1	1	1	NA	7/22/98	3	
Chloromethane	NONE	TO-15	1	1	1	NA	7/22/98	7	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/22/98	2	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/22/98	1	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/22/98	2	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/22/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/22/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/22/98	3	
Toluene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/22/98	3	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/22/98	2	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/22/98	7	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/22/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/22/98	10	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/22/98	U	

Approved By: Tom D. Kissinger Date 7/23/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: BEI/NAS Jacksonville / Bldg 106
Sample Matrix: Air

Service Request: J9801784
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. Method Blank
Lab Code. J980722-MB
Test Notes

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/22/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/22/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/22/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/22/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/22/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/22/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/22/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/22/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/22/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/22/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/22/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/22/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/22/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/22/98	U	
Toluene	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/22/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/22/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/22/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/22/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/22/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/22/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/22/98	U	

Approved By: Tom D. Kissinger Date 7/23/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801784
Project:	BEL/NAS Jacksonville / Bldg 106	**Date Collected:**	7/14/98
Sample Matrix:	Air	**Date Received:**	7/16/98
		Date Extracted:	NA
		Date Analyzed:	7/22/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units:	PERCENT
Analysis Method	TO-15	Basis:	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX00995	J9801784-001		110	104	99
Method Blank	J980722-MB		103	103	94
Lab Control Sample	J980722-LCS		109	101	99
CAS Acceptance Limits			50-150	50-150	50-150

Approved By: Tom D. Lessinger Date 7/23/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801784
Project:	BEI/NAS Jacksonville / Bldg 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	7/22/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name:	Lab Control Sample	Units:	ug/m3
Lab Code:	J980722-LCS	Basis:	NA
Test Notes.			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	25	125	50-150	
Benzene	NONE	TO-15	16	18	113	50-150	
Trichloroethene	NONE	TO-15	27	28	104	50-150	
Toluene	NONE	TO-15	19	19	100	50-150	
Chlorobenzene	NONE	TO-15	24	21	88	50-150	

Approved By: Tom D. Kissinger Date. 7/23/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801784
Project: BEI/NAS Jacksonville / Bldg 106
Cooler received on 7/16/98 and opened on 7/16/98 by wrk

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt		Degrees C	

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

CHAIN OF CUSTODY RECORD

Page ___ of ___

BECHTEL

Facility Name: BEI / NAS Jacksonville
Site Name: Bldg 106
Delivery Order No.:
Cooler/Crate No.:
Sampling Event:: Weekly Post GAC

SEIR No:
COC Number: 208
Lab:
Field Logbook No:
Logbook Pg No.:

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (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
JX00995	Post GAC	INV	NK	7-14-98 / 1550	01	—	NA	TO-15	5 Day	NA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	Walter Kronz	7-15-98	1510	7/16/98

COMMENTS/INSTRUCTIONS

PO. 277-CC 2608

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper _____

Ship to. _____

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

Columbia Analytical Services inc.
An Employee-Owned Company

July 13, 1998

Service Request No. J9801707

Certification Numbers:

Florida DEP:	930298G
Florida HRS.	E82502; 82483
Massachusetts:	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Bldg. 106
Project Name: NAS Jacksonville/BEI

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on July 8, 1998. For your reference, these analyses have been assigned our service request number: J9801707

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jerry Allen
Project Chemist

JA/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ (904) 739-2277 ▪ 800-695-7222 ▪ Fax [illegible]

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: NAS Jacksonville/BEI / Bldg. 106
Sample Matrix: Air

Service Request: J9801707
Date Collected: 7/7/98
Date Received: 7/8/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX00990
Lab Code: J9801707-001
Test Notes

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/9/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/9/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/9/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/9/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/9/98	3	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/9/98	1	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/9/98	1	
Chloromethane	NONE	TO-15	1	1	1	NA	7/9/98	5	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/9/98	9	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/9/98	34	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/9/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/9/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/9/98	1	
Toluene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/9/98	2	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/9/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/9/98	7	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/9/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/9/98	9	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/9/98	180	

Approved By: _____ Date 7/13/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: NAS Jacksonville/BEI / Bldg. 106
Sample Matrix: Air

Service Request: J9801707
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. Method Blank
Lab Code. J980709-MB
Test Notes:

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/9/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/9/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/9/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/9/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/9/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/9/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/9/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/9/98	U	
Toluene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/9/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/9/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/9/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/9/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/9/98	U	

Approved By: [signature] Date 7/13/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801707
Project:	NAS Jacksonville/BEI / Bldg 106	**Date Collected:**	7/7/98
Sample Matrix:	Air	**Date Received:**	7/8/98
		Date Extracted:	NA
		Date Analyzed:	7/9/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units:	PERCENT
Analysis Method	TO-15	Basis	NA

Sample Name	Lab Code	Test Notes	Percent Recovery		
			1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX00990	J9801707-001		113	108	94
Lab Control Sample	J980709-LCS		108	104	94
Method Blank	J980709-MB		106	108	88
CAS Acceptance Limits:			50-150	50-150	50-150

Approved By: _____ Date 7/13/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801707
Project:	NAS Jacksonville/BEI / Bldg. 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	7/9/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name:	Lab Control Sample	Units:	ug/m3
Lab Code:	J980709-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	20	100	50-150	
Benzene	NONE	TO-15	16	15	94	50-150	
Trichloroethene	NONE	TO-15	27	24	89	50-150	
Toluene	NONE	TO-15	19	16	84	50-150	
Chlorobenzene	NONE	TO-15	24	17	71	50-150	

Approved By: _____ Date: 7/13/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801707

Project: NAS Jacksonville/BEI / Bldg. 106

Cooler received on 7/8/98 and opened on 7/8/98 by kah

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

BECHTEL

Facility Name: NAS Jacksonville / CSI
Site Name: bldg 106 / Weekly
Delivery Order No.:
Cooler/Crate No.:
Sampling Event:: Weekly Post GAC

SEIR No
COC Number: 204
Lab
Field Logbook No.:
Logbook Pg No..

Sampled by: Dane Culshaw (Print) Dane Culshaw (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
Post GAC	JX00990	ENV	AIR	7-7-98 / 1300	C1	———	NA	TO 15	5 Day	NA

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Culshaw	[signature]	7 5 98	1330	

COMMENTS/INSTRUCTIONS

PO # 277-CC-2625

J9801707

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper ___

Ship to ___

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

Columbia Analytical Services inc.
An Employee-Owned Company

July 13, 1998

Service Request No. J9801676

Certification Numbers:

Florida DEP	930298G
Florida HRS	E82502, 82483
Massachusetts.	M-FL937
New Hampshire.	294297-A, 294297-B
North Carolina:	527
South Carolina.	96021001
A2LA	0490-02

Dane Cutshaw
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

Project No: Building 106
Project Name: BEI/NAS Jacksonville

Dear Dane Cutshaw:

Enclosed are the results of the sample(s) submitted to our laboratory on July 6, 1998 For your reference, these analyses have been assigned our service request number: J9801676

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger

Tom Kissinger
Project Chemist

TK/jg

8540 Baycenter Rd ▪ Jacksonville FL 32256 ▪ 904 739-2277 ▪ 800-695-7222 ▪ Fax 904-739-2

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: BEI/NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9801676
Date Collected: 7/1/98
Date Received: 7/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name. JX00943
Lab Code. J9801676-001
Test Notes:

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/9/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/9/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/9/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/9/98	2	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/9/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/9/98	3	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/9/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/9/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	7/9/98	5	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	2	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/9/98	7	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/9/98	62	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/9/98	10	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/9/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/9/98	6	
Toluene	NONE	TO-15	1	1	1	NA	7/9/98	3	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/9/98	47	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	1	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/9/98	6	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/9/98	5	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/9/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/9/98	8	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/9/98	280	

Approved By: Tom D. Kissinger Date. 7/13/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: BEI/NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9801676
Date Collected: 7/1/98
Date Received: 7/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX00944
Lab Code: J9801676-002
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/9/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/9/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/9/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/9/98	1	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/9/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/9/98	8	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/9/98	1	
Chloroform	NONE	TO-15	1	1	1	NA	7/9/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	7/9/98	9	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	1	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	4	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	60	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	350	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/9/98	7	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/9/98	67	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/9/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/9/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/9/98	5	
Toluene	NONE	TO-15	1	1	1	NA	7/9/98	3	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/9/98	32	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	1	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/9/98	1	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/9/98	6	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/9/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/9/98	8	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/9/98	310	

Approved By: Tom D. Kissinger Date 7/13/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: BEI/NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9801676
Date Collected: 7/1/98
Date Received: 7/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX00945
Lab Code J9801676-003
Test Notes:

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/10/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/10/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/10/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/10/98	2	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/10/98	2	
Bromoform	NONE	TO-15	1	1	1	NA	7/10/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/10/98	2	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/10/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/10/98	8	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/10/98	2	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/10/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/10/98	2	
Chloromethane	NONE	TO-15	1	1	1	NA	7/10/98	4	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/10/98	3	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/10/98	67	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/10/98	67	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/10/98	7	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/10/98	73	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/10/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/10/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/10/98	280	
Toluene	NONE	TO-15	1	1	1	NA	7/10/98	12	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/10/98	46	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/10/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/10/98	180	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/10/98	5	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/10/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/10/98	3	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/10/98	330	

Approved By: Tom D. Hissinger Date 7/13/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc
Project: BEI/NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9801676
Date Collected: 7/1/98
Date Received: 7/6/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name JX00946
Lab Code: J9801676-004
Test Notes:

Units ug/m3
Basis NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	500	10	10	NA	7/9/98	U	
Acrolein	NONE	TO-15	100	5	10	NA	7/9/98	U	
Acrylonitrile	NONE	TO-15	100	4	10	NA	7/9/98	U	
Benzene	NONE	TO-15	10	1	10	NA	7/9/98	U	
Bromodichloromethane	NONE	TO-15	10	1	10	NA	7/9/98	30	
Bromoform	NONE	TO-15	10	1	10	NA	7/9/98	U	
Bromomethane	NONE	TO-15	10	1	10	NA	7/9/98	23	
2-Butanone (MEK)	NONE	TO-15	100	4	10	NA	7/9/98	U	
Carbon Disulfide	NONE	TO-15	10	1	10	NA	7/9/98	U	
Carbon Tetrachloride	NONE	TO-15	10	1	10	NA	7/9/98	16	
Chlorobenzene	NONE	TO-15	10	1	10	NA	7/9/98	U	
Chloroethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
Chloroform	NONE	TO-15	10	1	10	NA	7/9/98	18	
Chloromethane	NONE	TO-15	10	1	10	NA	7/9/98	21	
Dibromochloromethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,2-Dichlorobenzene	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,3-Dichlorobenzene	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,4-Dichlorobenzene	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,1-Dichloroethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,2-Dichloroethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,1-Dichloroethene	NONE	TO-15	10	1	10	NA	7/9/98	14	
cis-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	7/9/98	1300	
trans-1,2-Dichloroethene	NONE	TO-15	10	1	10	NA	7/9/98	2900	
Dichlorodifluoromethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
Ethylbenzene	NONE	TO-15	10	1	10	NA	7/9/98	46	
Methylene Chloride	NONE	TO-15	100	1	10	NA	7/9/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	100	2	10	NA	7/9/98	U	
Styrene	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	10	1	10	NA	7/9/98	8700	
Toluene	NONE	TO-15	10	1	10	NA	7/9/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	10	1	10	NA	7/9/98	52	
1,1,2-Trichloroethane	NONE	TO-15	10	1	10	NA	7/9/98	U	
Trichloroethene (TCE)	NONE	TO-15	10	1	10	NA	7/9/98	3000	
Trichlorofluoromethane (CF	NONE	TO-15	10	1	10	NA	7/9/98	21	
Vinyl Acetate	NONE	TO-15	100	1	10	NA	7/9/98	U	
Vinyl Chloride	NONE	TO-15	10	1	10	NA	7/9/98	24	
Total Xylenes	NONE	TO-15	20	2	10	NA	7/9/98	210	

Approved By Tom D. Kissinger Date 7/13/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: BEI/NAS Jacksonville / Building 106
Sample Matrix: Air

Service Request: J9801676
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J980709-MB
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	7/9/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	7/9/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	7/9/98	U	
Benzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	7/9/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	7/9/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	7/9/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	7/9/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	7/9/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	7/9/98	U	
Styrene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	7/9/98	U	
Toluene	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	7/9/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	7/9/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	7/9/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	7/9/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	7/9/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	7/9/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	7/9/98	U	

Approved By: Tom D. Kissinger Date 7/7/98

1S44/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc	**Service Request:**	J9801676
Project:	BEI/NAS Jacksonville / Building 106	**Date Collected:**	7/1/98
Sample Matrix:	Air	**Date Received:**	7/6/98
		Date Extracted:	NA
		Date Analyzed:	7/9-10/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method	NONE	Units.	PERCENT
Analysis Method.	TO-15	Basis	NA

Sample Name	**Lab Code**	**Test Notes**	**Percent Recovery** 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX00943	J9801676-001		114	106	95
JX00944	J9801676-002		112	106	94
JX00945	J9801676-003		114	107	94
JX00946	J9801676-004		111	103	89
Lab Control Sample	J980709-LCS		108	104	94
Method Blank	J980709-MB		106	108	88
CAS Acceptance Limits:			50-150	50-150	50-150

Approved By: Tom D. Hassinger Date 7/13/98

SUR3/052595

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Bechtel Environmental Inc.	**Service Request:**	J9801676
Project:	BEI/NAS Jacksonville / Building 106	**Date Collected:**	NA
LCS Matrix:	Air	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	7/9/98

Laboratory Control Sample Summary

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name:	Lab Control Sample	Units:	ug/m3
Lab Code:	J980709-LCS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	20	100	50-150	
Benzene	NONE	TO-15	16	15	94	50-150	
Trichloroethene	NONE	TO-15	27	24	89	50-150	
Toluene	NONE	TO-15	19	16	84	50-150	
Chlorobenzene	NONE	TO-15	24	17	71	50-150	

Approved By: Tom D. Kissinger Date: 7/13/98

LCS/52595

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9801676
Project: BEI/NAS Jacksonville / Building 106
Cooler received on 7/6/98 and opened on 7/6/98 by kah

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☒	☐
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

CHAIN OF CUSTODY RECORD

Page ___ of ___

BECHTEL

Facility Name: BEI / NAS Jacksonville
Site Name: Building 106
Delivery Order No.:
Cooler/Crate No.:
Sampling Event:: Weekly & Monthly Air

SEIR No
COC Number: 175
Lab.
Field Logbook No.:
Logbook Pg. No.:

Sampled by: Dane Cutshaw (Print) Dane Cutshaw (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
Post GAC	JX00943	ENV	AIR	7-1-98 / 0910	01	None	NA	TO 15	5 Day	NA
Between GAC	JX00944	↓	↓	↓ / 0920	01	↓		↓	↓	↓
106-2	JX00945	↓	↓	↓ / 0940	01	↓		↓	↓	↓
106-1	JX00946	↓	↓	↓ / 0930	01	↓		↓	↓	↓

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
Dane Cutshaw	[signature]	7-6-98	0830	

COMMENTS/INSTRUCTIONS

277-CC - 2608

CONTAMINATION	YES	NO
Radiological		
Chemical		

Shipper:

Ship to

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

J9801676

ATTACHMENT D
SPENT CARBON ANALYTICAL RESULTS

SOIL VAPOR EXTRACTION SYSTEM
SPENT CARBON ANALYTICAL RESULTS

BUILDING 106

NAS JACKSONVILLE

Sample Location	Date	Sample ID	Concentration (mg/Kg)			
			Vinyl Chloride	trans-1,2-Dichloroethene	Trichloroethene (TCE)	Tetreachloroethene (PCE)
East Carbon Unit	8/13/98	CS-1	ND	0 380	0 760	10 420
West Carbon Unit						

ND - not detected above method reporting limit

Advanced Environmental Laboratories, Inc.

Analytical Report

Client:	Great Lakes Carbon Treatment	**Report No.:**	J981266
Project No.:	NAS JAX Bldg 106	**Date Sampled:**	8/13/98
Matrix:	Soil	**Date Submitted:**	8/15/98
		Date Reported:	8/18/98
		Page No.:	2 of 3

Volatile Halocarbon Compounds
EPA Method 5030/8021
Units: µg/Kg

	Lab Code:	981266-1	981262-mb
	Dilution Factor:	200	1
	Date Analyzed:	8/15/98	8/15/98
Analytes	**MRL**	**CS-1**	**Method Blank**
Dichlorodifluoromethane	200	U	U
Chloromethane	200	U	U
Vinyl Chloride	200	U	U
Bromomethane	200	U	U
Chloroethane	200	U	U
Trichlorofluoromethane	200	U	U
1,1-Dichloroethene	200	U	U
Methylene Chloride	200	U	U
trans-1,2-Dichloroethene	200	380	U
1,1-Dichloroethane	200	U	U
Chloroform	200	U	U
1,1,1-Trichloroethane	200	U	U
Carbon Tetrachloride	200	U	U
1,2-Dichloroethane	200	U	U
Trichloroethene	200	760	U
1,2-Dichloropropane	200	U	U
Bromodichloromethane	200	U	U
cis-1,3-Dichloropropene	200	U	U
trans-Dichloropropene	200	U	U
1,1,2-Trichloroethane	200	U	U
Tetrachloroethene	200	10420	U
Dibromochloromethane	200	U	U
Chlorobenzene	200	U	U
Bromoform	200	U	U
1,1,2,2-Tetrachloroethane	200	U	U
1,3-Dichlorobenzene	200	U	U
1,4-Dichlorobenzene	200	U	U
1,2-Dichlorobenzene	200	U	U

Surrogates	**Acceptance Limits**	**Percent Recovery**	**Percent Recovery**
Bromochloromethane	70-135	90	74

U Not detected above the MRL
MRL Method Reporting Limit

Advanced Environmental Laboratories, Inc.

Quality Assurance Report

Client:	Great Lakes Carbon Treatment	**Report No.:**	J981266
Project No.:	NAS JAX Bldg 106	**Date Sampled:**	8/13/98
Matrix:	Soil	**Date Submitted:**	8/15/98
		Date Reported:	8/18/98

[redacted]
Units: µg/Kg

Matrix Spike/Matrix Spike Duplicate Summary

Lab Code : 981224-1ms
Date Analyzed: 8/15/98

Analyte	Spike Level MS	Spike Level MSD	Sample Result	Spike Result MS	Spike Result MSD	% Recovery MS	% Recovery MSD	Acceptance limits	% RPD
1,1-Dichloroethene	50	50	U	72.4	69.5	145	139	28-167	4
Trichloroethene	50	50	U	71.0	64.3	142	129	35-147	10
Tetrachloroethene	50	50	U	79.1	62.0	158	124	26-162	24
Surrogates									
Bromochloromethane	50	50		59.5	49.3	119	99	70-135	18

Laboratory Control Sample Summary

Lab Code : 981262-lcs
Date Analyzed: 8/15/98

Analyte	True Value	Result	Percent Recovery	Acceptance Limits
1,1-Dichloroethene	50	49.5	99	28-167
Trichloroethene	50	35.8	72	35-146
Tetrachloroethene	50	62.1	124	26-162
Surrogates				
Bromochloromethane	50	40.9	82	70-135

U Not detected above the MRL

Advanced Environmental Laboratories, Inc.

8936 Western Way • Suite 7
Jacksonville, Florida 32256
(904) 363-9350
FAX (904) 363-9354

Client: Great Lakes Carbon Treatment
Project Name: NAS Jax Bldg 106
Project No.:

Address: 3300 US Highway 131 North
Kalkaska, MI 49646

Attention: Paul Domalgalski

Report No.: J981266
Date Sampled: 8/13/98
Date Submitted: 8/15/98
Date Reported 8/18/98

Project Chemist: Chuck Ged

Page No.: 1 of 3

Sample Description

The following soil sample was submitted by Florida Environmental Compliance Corp. for Great Lakes Carbon Treatment on 8/18/98 for analysis outlined on the attached Chain of Custody:

Project # NAS JAX Bldg 106

1. CS-1 @ 12:12

Approved by: Charles Ged
Charles Ged, Laboratory Director

DER# 940242
HRS# 82533,E82574

Columbia Analytical Services INC.
An Employee-Owned Company

November 19, 1998

Service Request No. J9802862

Certification Numbers:

Florida DEP.	930298G
Florida HRS:	E82502; 82483
Massachusetts.	M-FL937
New Hampshire:	294297-A, 294297-B
North Carolina:	527
South Carolina:	96021001
A2LA	0490-02

W.J. Canelos
Bechtel Environmental Inc.
P.O. Box 171, NAS Cecil Field
Jacksonville, FL 32215

RE: Project No.: NAS Jax Bldg 106
Project Name. Weekly Air Sampling

Dear W.J. Canelos.

Enclosed are the results of the samples(s) submitted to our laboratory on November 12, 1998 For your reference, these analyses have been assigned our service request number. J9802862.

All analyses were performed according to our laboratory's quality assurance program All results are intended to be considered in the entirety, and Columbia Analytical Services, Inc (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Tom Kissinger
Project Chemist

TK/jg

8540 Baycenter Rd ▪ Jacksonville, FL 32256 ▪ (904) 739-2277 ▪ Fax (904) 739 2011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly Air Sampling / NAS Jax Bldg 106
Sample Matrix: Air

Service Request: J9802862
Date Collected: 11/5/98
Date Received: 11/12/98

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: JX01052
Lab Code: J9802862-001
Test Notes:

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	11/16/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	11/16/98	43	
Acrylonitrile	NONE	TO-15	10	4	1	NA	11/16/98	U	
Benzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	11/16/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	11/16/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	11/16/98	8	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	11/16/98	3	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	11/16/98	1	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	11/16/98	11	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	11/16/98	280	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	11/16/98	4	
Ethylbenzene	NONE	TO-15	1	1	1	NA	11/16/98	2	
Methylene Chloride	NONE	TO-15	10	1	1	NA	11/16/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	11/16/98	U	
Styrene	NONE	TO-15	1	1	1	NA	11/16/98	12	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	11/16/98	U	
Toluene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	11/16/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	11/16/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	11/16/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	11/16/98	50	
Total Xylenes	NONE	TO-15	2	2	1	NA	11/16/98	6	

Approved By: Tan D. Kissinger Date: 11/19/98

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Bechtel Environmental Inc.
Project: Weekly Air Sampling / NAS Jax Bldg 106
Sample Matrix: Air

Service Request: J9802862
Date Collected: NA
Date Received: NA

Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Method Blank
Lab Code: J981115-MB
Test Notes:

Units ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Acetone	NONE	TO-15	50	10	1	NA	11/16/98	U	
Acrolein	NONE	TO-15	10	5	1	NA	11/16/98	U	
Acrylonitrile	NONE	TO-15	10	4	1	NA	11/16/98	U	
Benzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
Bromodichloromethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Bromoform	NONE	TO-15	1	1	1	NA	11/16/98	U	
Bromomethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
2-Butanone (MEK)	NONE	TO-15	10	4	1	NA	11/16/98	U	
Carbon Disulfide	NONE	TO-15	1	1	1	NA	11/16/98	U	
Carbon Tetrachloride	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chloroform	NONE	TO-15	1	1	1	NA	11/16/98	U	
Chloromethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Dibromochloromethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,2-Dichlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,3-Dichlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,4-Dichlorobenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1-Dichloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,2-Dichloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1-Dichloroethene	NONE	TO-15	1	1	1	NA	11/16/98	U	
cis-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	11/16/98	U	
trans-1,2-Dichloroethene	NONE	TO-15	1	1	1	NA	11/16/98	U	
Dichlorodifluoromethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Ethylbenzene	NONE	TO-15	1	1	1	NA	11/16/98	U	
Methylene Chloride	NONE	TO-15	10	1	1	NA	11/16/98	U	
4-Methyl-2-pentanone (MIB	NONE	TO-15	10	2	1	NA	11/16/98	U	
Styrene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1,2,2-Tetrachloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Tetrachloroethene (PCE)	NONE	TO-15	1	1	1	NA	11/16/98	U	
Toluene	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1,1-Trichloroethane (TCA)	NONE	TO-15	1	1	1	NA	11/16/98	U	
1,1,2-Trichloroethane	NONE	TO-15	1	1	1	NA	11/16/98	U	
Trichloroethene (TCE)	NONE	TO-15	1	1	1	NA	11/16/98	U	
Trichlorofluoromethane (CF	NONE	TO-15	1	1	1	NA	11/16/98	U	
Vinyl Acetate	NONE	TO-15	10	1	1	NA	11/16/98	U	
Vinyl Chloride	NONE	TO-15	1	1	1	NA	11/16/98	U	
Total Xylenes	NONE	TO-15	2	2	1	NA	11/16/98	U	

Approved By Tom D. Chassing Date 11/19/98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc
Project: Weekly Air Sampling / NAS Jax Bldg 106
Sample Matrix: Air

Service Request: J9802862
Date Collected: 11/5/98
Date Received: 11/12/98
Date Extracted: NA
Date Analyzed: 11/16/98

Surrogate Recovery Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Prep Method: NONE
Analysis Method: TO-15

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 1,2-Dichloroethane-d4	Toluene-d_8	4-Bromofluorobenzene
JX01052	J9802862-001		117	101	83
Method Blank	J981115-MB		113	103	80
Lab Control Sample	J981115-LCS		111	99	81
CAS Acceptance Limits			50-150	50-150	50-150

Approved By: Tom D. Hussinger Date 11/19/98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Bechtel Environmental Inc.
Project: Weekly Air Sampling / NAS Jax Bldg 106
LCS Matrix: Air

Service Request: J9802862
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 11/16/98

Laboratory Control Sample Summary
Volatile Organic Compounds in Air Using SUMMA Passivated Canister and GC/MS

Sample Name: Lab Control Sample
Lab Code: J981115-LCS
Test Notes.

Units: ug/m3
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
1,1-Dichloroethene	NONE	TO-15	20	24	120	50-150	
Benzene	NONE	TO-15	16	18	113	50-150	
Trichloroethene	NONE	TO-15	27	22	81	50-150	
Toluene	NONE	TO-15	19	18	95	50-150	
Chlorobenzene	NONE	TO-15	24	26	108	50-150	

Approved By: Tom D. Kissinger Date: 11/19/98

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client: Bechtel Environmental Inc. Work order: J9802862
Project: Weekly Air Sampling / NAS Jax Bldg 106
Cooler received on 11/12/98 and opened on 11/12/98 by THT

		Yes	No	N/A
1	Were custody seals on outside of cooler?	☐	☐	☒
	If yes, how many and where?			☒
	Were signature and date correct?	☐	☐	☒
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?	☐	☐	☒
8	Temperature of cooler upon receipt	_____ Degrees C		

Explain any discrepancies: _____

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS Jacksonville
Site Name: Bldg 106
Delivery Order No.: 277
Cooler/Crate No.: Summa # Entech 02461
Sampling Event: Weekly Air Sampling

SEIR No.: N/A
COC Number: JX247
Lab: Columbia Analytical Labs
Field Logbook No.: JX-PA-010
Logbook Pg. No.: 8

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

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind 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	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SLW	Solid Waste	SST	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DPW	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 QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
Post GAC	JX01052	ENV	AIR	11-5-98/16.50	01	N/A		TO-15	5-day	C

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
W/ Canales	[illegible]	11/2/98	0945	

COMMENTS/INSTRUCTIONS

PO # 277-CC-2718

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper: Pick-up by CAS Lab

Ship to: Columbia Analytical Services 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