N00204.AR.004990
NAS PENSACOLA
5090.3a

LETTER REPORT REGARDING REQUEST FOR DISPOSAL OF COLLECTED INVESTIGATION DERIVED WASTE AT UST 681 AND 682 AT NAS PENSACOLA FL
12/21/1999
TETRA TECH INC

01230313

TETRA TECH NUS, INC.
1401 Oven Park Drive • Suite 102 • Tallahassee, FL 32312
(850) 385-9899 • FAX (850) 385-9860 • www.tetratech.com

December 21, 1999

Project Number N0231

Mr. Greg Campbell
Code 00400 Building 624
190 Radford Boulevard
Naval Air Station Pensacola
Pensacola, Florida 32508-0500

Reference: CLEAN Contract No. N62467-94-D-0888
Contract Task Order No. 098

Subject: Disposal of Collected Investigation Derived Waste (Monitoring Well Purge Water) at Naval Air Station (NAS) Pensacola – Underground Storage Tanks (USTs) 681 and 682

Dear Mr. Campbell,

Tetra Tech NUS, Inc. has collected Investigation Derived Wastes (IDW) during the Underground Tank Storage Tank (UST) Investigation, and requests your assistance in the disposal of the materials. During a groundwater sampling event at NAS Pensacola, monitoring well purge water from 6 monitoring wells at the two (2) tanks was collected. The purge water was collected in a single drum and stored at Naval Air Station Pensacola. The groundwater sample analytical results were reviewed for compounds present above the Groundwater and Surface water Cleanup Target Levels (CTLs) listed in Table 1 of Chapter 62-777, F.A.C.

Review of the analytical results for the groundwater samples indicated the following compounds at concentrations exceeding the Florida groundwater CTLs.

- Ethylene Dibromide @ 0.54 ug/L
- 1,1-Dichloroethane @ 90 ug/L
- Tetrachloroethene @ 14 ug/L
- 1,1,1-Trichloroethane @ 18 ug/L
- 1,1-Dichloroethene @ 10ug/L

Based on the analytical data, the drum will require appropriate disposal. Attached is the complete analytical data package for the groundwater samples collected at the NAS Pensacola tanks.

If you have any questions, please contact either Terry Hansen or myself at (850) 385-9899.

Sincerely,

William Howard Engle
Project Chemist

WHE/whe

Enclosures (1)

c: Mr. Terry Hansen (w/o enclosure)
Mr. Ron Joyner
File

Environmental Conservation Laboratories, Inc.
10207 General Drive
Orlando, Florida 32824-8529
407 / 826-5314
Fax 407 / 850-6945
www.encolabs.com

ENCO Laboratories

DHRS Certification No. E83182

CLIENT : Tetra Tech NUS
ADDRESS: 1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32312

REPORT # : OR8614
DATE SUBMITTED: October 27, 1999
DATE REPORTED : November 4, 1999

ATTENTION: Terry Hanson

SAMPLE IDENTIFICATION

Samples submitted and
identified by client as:

PROJECT #: CTO 0098

NAS Pensacola

10/26/99

#1 - 681/82-1S-01 @ 11:15
#2 - 681/82-2S-01 @ 10:59
#3 - 681/82-3S-01 @ 16:40
#4 - 681/82-4S-01 @ 11:26
#5 - 681/82-5S-01 @ 12:00
#6 - 681/82-3S-01MS @ 16:40
#7 - 30GS146-01 @ 16:45
#8 - 681/82-DD-01
#9 - TRIP BLANK

PROJECT MANAGER _____
David Vesey

ENVIRONMENTAL CONSERVATION LABORATORIES

4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
Ph. (904) 296-3007 • Fax (904) 296-6210

10207 General Drive
Orlando, Florida 32824-8529
Ph. (407) 826-5314 • Fax (407) 850-6945

1015 Passport Way
Cary, North Carolina 27513
Ph. (919) 677-1669 • Fax (919) 677-9846

ENCO CompQAP No.: 960038G/0

CHAIN OF CUSTODY RECORD

PROJECT REFERENCE: NAS Pensacola
PROJECT NO.: CTO 0098
P.O. NUMBER: ~~CTO 0098~~
PAGE / OF
PROJECT LOC. (State): FL
SAMPLER(s) NAME: R. Franklin, J. Alexander, H.E. JE
PHONE: 850 385 9899
FAX: 850 385 9860
CLIENT NAME: Tetra Tech NUS
CLIENT PROJECT MANAGER: Terry Hanson
CLIENT ADDRESS (CITY, STATE, ZIP): 1400 Tallahassee, FL 32308

☐ STANDARD REPORT DELIVERY
☐ EXPEDITED REPORT DELIVERY (surcharge)
Date Due:

STATION	DATE	TIME	GRAB	COMP	SAMPLE IDENTIFICATION	SURFACE WATER	GROUND WATER	WASTEWATER	DRINKING WATER	SOIL/SOLID/SEDIMENT	NONAQUEOUS LIQUID (oil, solvent, etc.)	AIR	SLUDGE	OTHER	8021/Aromatics	8310	FLPRO	504	Lead	Nitrate	Sulfate	RSK 175		REMARKS
															HCl	—	H_2SO_4	PRESERVATIVE				HCl		
															NUMBER OF CONTAINERS SUBMITTED									
1	10 26 99	1115			681/82-1s-01		✓								2	1	1	2	1	1	1	2		
2	10 26 99	1059			681/82-2s-01		✓								2	1	1	2	1	1	1	2		
3	10 26 99	1640			681/82-3s-01		✓								2	1	1	2	1					
4	10 26 99	1126			681/82-4s-01		✓								2	1	1	2	1	1	1	2		
5	10 26 99	1200			681/82-5s-01		✓								2	1	1	2	1					
6	10 26 99	1640			681/82-3s-01MS		✓								2	1	1	2	1	—	MS/MSD	—		
7	10 26 99	1645			30GS146-01		✓								2	1	1	2	1					
8	10 26 99	—			681/82-DD-01		✓								2	1	1	2	1					
9					TRIP BLANK										2					—	TRIP BLANK	—		
10																								
11																								
12																								
13																								
14																								

SAMPLE KIT PREPARED BY: ☐JACKSONVILLE ☒ORLANDO	DATE	TIME	RELINQUISHED BY: (SIGNATURE) R. Armstrong	DATE 10/26/99	TIME 5:00	RECEIVED BY: (SIGNATURE)	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	DATE 10 26 99	TIME 1745	RECEIVED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	ENCO LOG NO.	REMARKS
Kevin Casey ☐ Jacksonville ☒ Orlando	10/27/99	10:00AM	☒ YES ☐ NO	OR8614	

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-1S-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	1.0 U	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	39	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	78	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/29/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-1S-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	51.5	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	103	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/29/99	

EPA METHOD 504	681/82-1S-01	Units
Ethylene Dibromide	**0.54**	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-1S-01	Units
Naphthalene	**5.6**	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	**0.11** I	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	9	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	90	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-1S-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	47.5	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	95	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

EPA METHOD RSK 175 - Dissolved Gasses	681/82-1S-01	Units
Methane	**1.4** D1	mg/L
Ethane	0.0010 U	mg/L
Ethene	0.0010 U	mg/L
Date Analyzed	11/03/99	

TOTAL METALS	METHOD	681/82-1S-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

U = Compound was analyzed for but not detected to the level shown.
D1 = Analyte value determined from a 1:2 dilution.

RESULTS OF ANALYSIS

MISCELLANEOUS	METHOD	681/82-1S-01	Units
Nitrate-N	353.1	0.020 U	mg/L
Date Analyzed		11/01/99	
Sulfate, Total	375.4	10 I	mg/L
Date Analyzed		11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-2S-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	1.0 U	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	42	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	84	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/29/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-2S-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	51.5	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	103	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/29/99	

EPA METHOD 504	681/82-2S-01	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-2S-01	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	**5.9**	µg/L
Acenaphthene	**1.1**	µg/L
Fluorene	**7.6**	µg/L
Phenanthrene	**3.9**	µg/L
Anthracene	**0.86**	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	**0.080**	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	9.4	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	94	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-2S-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	55	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	110	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

EPA METHOD RSK 175 - Dissolved Gasses	681/82-2S-01	Units
Methane	**0.061**	mg/L
Ethane	0.0010 U	mg/L
Ethene	0.0010 U	mg/L
Date Analyzed	11/03/99	

TOTAL METALS	METHOD	681/82-2S-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

RESULTS OF ANALYSIS

MISCELLANEOUS	METHOD	681/82-2S-01	Units
Nitrate-N	353.1	**0.74**	mg/L
Date Analyzed		11/01/99	
Sulfate, Total	375.4	**37**	mg/L
Date Analyzed		11/01/99	

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-3S-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	**1.7** I	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	44	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	88	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-3S-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	53	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	106	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

EPA METHOD 504	681/82-3S-01	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-3S-01	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	9.3	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	93	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/10/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-3S-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	43	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	86	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

TOTAL METALS	METHOD	681/82-3S-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-4S-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	**2.0** I	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	**3.8**	µg/L
Chloroform	**5.6**	µg/L
c-1,2-Dichloroethene	**6.6**	µg/L
1,1,1-Trichloroethane	**1.3** I	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	**2.0** I	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	**14**	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	45	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	90	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-4S-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	51.5	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	103	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

EPA METHOD 504	681/82-4S-01	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-4S-01	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	5.3	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	53	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-4S-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	44.5	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	89	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

EPA METHOD RSK 175 - Dissolved Gasses	681/82-4S-01	Units
Methane	0.0010 U	mg/L
Ethane	0.0010 U	mg/L
Ethene	0.0010 U	mg/L
Date Analyzed	11/03/99	

TOTAL METALS	METHOD	681/82-4S-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

RESULTS OF ANALYSIS

MISCELLANEOUS	METHOD	681/82-4S-01	Units
Nitrate-N	353.1	**1.3**	mg/L
Date Analyzed		11/01/99	
Sulfate, Total	375.4	**13**	mg/L
Date Analyzed		11/01/99	

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-5S-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	1.0 U	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	44	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	88	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/29/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-5S-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	52	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	104	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/29/99	

EPA METHOD 504	681/82-5S-01	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-5S-01	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	**0.13** I	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	8.8	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	88	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-5S-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	44	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	88	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

TOTAL METALS	METHOD	681/82-5S-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-3S-01MS	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	**2.4** I	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	43	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	86	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-3S-01MS	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	53.5	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	107	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

EPA METHOD 504	681/82-3S-01MS	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-3S-01MS	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	9.6	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	96	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-3S-01MS	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	51	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	102	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

TOTAL METALS	METHOD	681/82-3S-01MS	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	30GS146-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	**10**	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	**90**	µg/L
Chloroform	**2.6** I	µg/L
c-1,2-Dichloroethene	**2.7** I	µg/L
1,1,1-Trichloroethane	**18**	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	46	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	92	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	30GS146-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	54	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	108	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

EPA METHOD 504	30GS146-01	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	30GS146-01	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	**1.4**	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	9.5	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	95	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	30GS146-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	46.5	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	93	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

TOTAL METALS	METHOD	30GS146-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	681/82-DD-01	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	**2.5** I	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	45.5	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	91	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	681/82-DD-01	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	54	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	108	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

EPA METHOD 504	681/82-DD-01	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	681/82-DD-01	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	11	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	110	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	681/82-DD-01	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	37	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	74	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

TOTAL METALS	METHOD	681/82-DD-01	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	TRIP BLANK	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	1.0 U	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	41.5	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	83	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	TRIP BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	52	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	104	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE HALOGENS	LAB BLANK	Units
Dichlorodifluoromethane	1.0 U	µg/L
Chloromethane	1.0 U	µg/L
Vinyl Chloride	1.0 U	µg/L
Bromomethane	1.0 U	µg/L
Chloroethane	1.0 U	µg/L
Trichlorofluoromethane	1.0 U	µg/L
1,1-Dichloroethene	1.0 U	µg/L
Methylene Chloride	3.0 U	µg/L
t-1,2-Dichloroethene	1.0 U	µg/L
1,1-Dichloroethane	1.0 U	µg/L
Chloroform	1.0 U	µg/L
c-1,2-Dichloroethene	1.0 U	µg/L
1,1,1-Trichloroethane	1.0 U	µg/L
Carbon Tetrachloride	1.0 U	µg/L
1,2-Dichloroethane	1.0 U	µg/L
Trichloroethene	1.0 U	µg/L
1,2-Dichloropropane	1.0 U	µg/L
Bromodichloromethane	1.0 U	µg/L
c-1,3-Dichloropropene	1.0 U	µg/L
t-1,3-Dichloropropene	1.0 U	µg/L
1,1,2-Trichloroethane	1.0 U	µg/L
Tetrachloroethene	1.0 U	µg/L
Dibromochloromethane	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Bromoform	1.0 U	µg/L
1,1,2,2-Tetrachloroethane	2.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	43	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	86	%
Surrogate Control Limits	54-151	%
Date Analyzed	10/28/99	

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ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8021 - VOLATILE AROMATICS	LAB BLANK	Units
Methyl tert-butyl ether	2.0 U	µg/L
Benzene	1.0 U	µg/L
Toluene	1.0 U	µg/L
Chlorobenzene	1.0 U	µg/L
Ethylbenzene	1.0 U	µg/L
m-Xylene & p-Xylene	2.0 U	µg/L
o-Xylene	1.0 U	µg/L
1,3-Dichlorobenzene	1.0 U	µg/L
1,4-Dichlorobenzene	1.0 U	µg/L
1,2-Dichlorobenzene	1.0 U	µg/L
Surrogate: (Bromofluorobenzene)		
Surrogate Reported Value	53	µg/L
Surrogate Expected Value	50	µg/L
Surrogate % Recovery	106	%
Surrogate Control Limits	64-140	%
Date Analyzed	10/28/99	

EPA METHOD 504	LAB BLANK	Units
Ethylene Dibromide	0.020 U	µg/L
Dibromochloropropane	0.020 U	µg/L
Date Extracted	10/31/99	
Date Analyzed	11/01/99	

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

ENCO LABORATORIES
REPORT # : OR8614
DATE REPORTED: November 4, 1999
REFERENCE : CTO 0098
PROJECT NAME : NAS Pensacola

RESULTS OF ANALYSIS

EPA METHOD 8310 - POLYAROMATIC HYDROCARBONS	LAB BLANK	Units
Naphthalene	0.50 U	µg/L
Acenaphthylene	1.0 U	µg/L
1-Methylnaphthalene	1.0 U	µg/L
2-Methylnaphthalene	1.0 U	µg/L
Acenaphthene	0.50 U	µg/L
Fluorene	0.10 U	µg/L
Phenanthrene	1.0 U	µg/L
Anthracene	0.050 U	µg/L
Fluoranthene	0.10 U	µg/L
Pyrene	0.050 U	µg/L
Benzo(a)anthracene	0.050 U	µg/L
Chrysene	0.050 U	µg/L
Benzo(b)fluoranthene	0.10 U	µg/L
Benzo(k)fluoranthene	0.050 U	µg/L
Benzo(a)pyrene	0.050 U	µg/L
Dibenzo(a,h)anthracene	0.10 U	µg/L
Benzo(g,h,i)perylene	0.10 U	µg/L
Indeno(1,2,3-cd)pyrene	0.050 U	µg/L
Surrogate: (p-Terphenyl)		
Surrogate Reported Value	9.7	µg/L
Surrogate Expected Value	10	µg/L
Surrogate % Recovery	97	%
Surrogate Control Limits	39-148	%
Date Extracted	10/28/99	
Date Analyzed	11/01/99	

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

RESULTS OF ANALYSIS

EPA METHOD FLPRO - Petrol Residual Org.	LAB BLANK	Units
Hydrocarbons (C8-C40)	0.20 U	mg/L
Surrogate: (o-Terphenyl)		
Surrogate Reported Value	42	mg/L
Surrogate Expected Value	50	mg/L
Surrogate % Recovery	84	%
Surrogate Control Limits	35-153	%
Date Extracted	10/28/99	
Date Analyzed	10/31/99	

EPA METHOD RSK 175 - Dissolved Gasses	LAB BLANK	Units
Methane	0.0010 U	mg/L
Ethane	0.0010 U	mg/L
Ethene	0.0010 U	mg/L
Date Analyzed	11/03/99	

TOTAL METALS	METHOD	LAB BLANK	Units
Lead	239.2	0.0050 U	mg/L
Date Analyzed		10/30/99	

MISCELLANEOUS	METHOD	LAB BLANK	Units
Sulfate, Total	375.4	5.0 U	mg/L
Date Analyzed		11/01/99	

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

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	LCS Target µg	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 8021					
Methylene Chloride	133/120/ 92	20	66-137	10	25
Chloroform	156/146/110	20	61-131	7	24
Carbon Tetrachloride	179/168/108	20	65-130	6	26
Trichloroethene	134/132/ 90	20	55-139	2	26
Tetrachloroethene	164/163/100	20	60-135	<1	23
Chlorobenzene	162/174/116	20	68-123	7	22
EPA Method 8021					
Benzene	120/126/103	20	72-134	5	20
Toluene	113/119/ 94	20	72-124	5	19
Ethylbenzene	116/121/ 93	20	67-129	4	21
o-Xylene	107/114/ 90	20	66-131	6	21
EPA Method 504					
Ethylene Dibromide	96/ 94/111	0.25	57-130	2	18
EPA Method 8310					
Naphthalene	86/ 80/102	10	22-130	7	20
Acenaphthene	81/ 77/100	10	14-163	5	19
Benzo(a)pyrene	59/ 69/104	1	33-137	16	36
Benzo(g,h,i)perylene	55/ 62/ 96	2	36-135	12	34
EPA Method FLPRO					
Hydrocarbons (C8-C40)	98/ 84/ 75	850	33-165	15	27

Environmental Conservation Laboratories Comprehensive QA Plan #960038

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

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QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	LCS Target mg	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method RSK175					
Methane	NA/ NA/115	100	-	NA	
Ethane	NA/ NA/110	100	-	NA	
Ethene	NA/ NA/ 98	100	-	NA	
Total Metals					
Lead, 239.2	96/103/103		66-140	7	17
MISCELLANEOUS					
Sulfate, Total, 375.4	*/ */105		66-134	*	23

Environmental Conservation Laboratories Comprehensive QA Plan #960038

* = Matrix interference; unable to obtain accurate recovery
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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