REMEDIAL INVESTIGATION
SITE 5
GAMBELL, ST. LAWRENCE ISLAND, ALASKA
GROUNDWATER SAMPLING

Prepared for:

U.S. Army Engineer District, Alaska
United States Army Engineer District, Alaska
P. O. Box 898
Anchorage, Alaska 99506-0898

March 26, 1999

Prepared by:

Montgomery Watson
4100 Spenard Road
Anchorage, Alaska 99517

Montgomery Watson Project No. 1189098.040101
Contract No. DACA85-98-D-0007

May 17, 1999

Ms. Suzanne Beauchamp
Department of the Army
U.S. Army Engineer District, Alaska
Environmental Engineering Branch
P.O. Box 898
Anchorage, Alaska 99506-0898

Dear Ms. Beauchamp:

Montgomery Watson is forwarding this letter (document) for your files. This shall serve as the final requirement of the groundwater sampling at Gambell, Alaska in March 1999.

The objective of this round of groundwater sampling was to determine if hydrocarbons, which might be present in the soil resulting from former military activities, might be present in the potable water system in Gambell, St. Lawrence Island, Alaska.

The scope of work consisted of collecting and analyzing water samples from the four monitoring wells (MW) constructed in 1998 and two samples from the village water well. The village water well samples were to be collected from the village well point and a post clorination tap, located in the village water treatment facility.

This report is being presented in the following format:

- Summary of events and results.
- Tabbed sections containing the Sample Results Comparison to Alaska Regulations, Field Forms, and Laboratory Results.

The field team consisted of Bonnie McLean, field team leader, and Doug Quist, senior field chemist. On March 25, a field survey verified that all the monitoring wells were frozen solid. Below top of casing ice measurements were collected and recorded, except MW 29, which was covered by four feet of hard packed snow.

Sampling of the village water well and tap were completed on March 26, 1999. All quality control (QC) samples (a duplicate and MS/MDS) were collected with the primary sample (99 GAM NVW 001) from the new village well house. A second primary sample was collected from a tap (99 GAM TAP 001) just after the clorinazation treatment in the water treatment building. All samples were analyzed for the following: DRO/RRO, GRO/BTEX, VOC, SVOC, Alkalinity, Chloride, and Ion balance. The results are included in this document.

The pump has been pulling a greater amount of sediment than normal and the operator has to wash the filters every other day instead of weekly.

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It was learned that a 1 1/4" return supply line feeds treated water back to the well house and dumps directly into the well gallery. This results in treated return water being included in part, with the well water sample. Analytical results are shown in the attached table and a comparison is of results to ADEC applicable regulatory criteria are also presented.

In summary, DRO, RRO, GRO, and BTEX were all non-detect (ND). Four compounds comprising Total Trihalomethanes (TTHMs) were not ND seem to be a result of the clorination process. TTHMs are the sum of the concentration of bromodichloromethane, dibromochlormethane, tribrommethane (bromoform), and trichloromethane (cloroform). The results were much higher in the TAP sample for these compounds then in the diluted new village well (NVW) sample. The Total Trihalomethanes (TTHMs) contaminant level was below the ADEC Drinking Water Regulation.

All sample results were below ADEC regulations.

If you have any questions, please give me a call at 266-1141.

Sincerely,

Bonnie McLean
Field Team Leader

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SAMPLE RESULTS COMPARED TO ALASKA REGULATIONS

The following table is a summary of primary and duplicate positive sample results compared to Alaska Department of Environmental Conservation (ADEC) Title 18 Chapter 80 Drinking Water Regulations (ACC 80.070), 1994. Sample results are below maximum contaminant levels.

Analytes with Positive Results

Sample ID	Bromodichloromethane mg/L	Chloroform mg/L	Dibromochloromethane mg/L	Bromoform mg/L	TTHMs mg/L	Maximum Contaminant Level TTHMs mg/L
99GAMNVW001	0.0017	0.001	0.0015	ND	0.0042	0.1
*99GAMNVW201	0.0017	ND	0.0014	ND	0.0031	0.1
99GAMTAP001	0.027	0.014	0.028	0.011	0.08	0.1

*-Sample 99GAMNVW201 is the field duplicate sample of 99GAMNVW001.
TTHMs -Total Trihalomethanes (the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromethane(bromoform) and trichloromethane (chloroform)).

DATA REVIEW OF PRIMARY AND FIELD DUPLICATE SAMPLES

Water analysis data for the March 26, 1999 sampling of Gambell Site 5 have been reviewed for precision, accuracy, and completeness. Four samples, including two primary samples, one trip blank, and one field duplicate were submitted to Quanterra Environmental Services, Anchorage, Alaska for analysis.

The following quality control (QC) samples and indicators were reviewed in accordance with the established PARCC parameters (PARCC parameters were defined in the QAPP Addendum for Site 5 Remedial Invistigation Work Plan, Gambell, Alaska).

- Holding Times
- Field and laboratory blanks
- Field and laboratory duplicate/split samples
- Matrix spike/duplicate matrix spike samples
- Laboratory control/duplicate laboratory control samples
- Method reporting limits
- Surrogates

- Sample receipt information

A review of the data submitted indicates that the resulting data set is suitable for its intended use, with some qualification, as described in the following sections.

Data Review Results

A review of the Gambell Site 5 data packages indicates that all sample results and report submittal elements (hard copy) were complete, correct, consistent and complied with contract requirements. The following text summarizes significant data review findings.

- The VOC by SW8260 MS/MSD percent recoveries were within laboratory acceptance limits, with the exception of 2-chloroethyl vinyl ether, styrene, and vinyl acetate in sample 99GAMNVW201. Two analytes were qualified as rejected (VR) due to 0% recoveries, and one analyte qualified with an estimated practical quantitation limit (VQQ).

Analyte	sample result ug/L	% recoveries MS	% recoveries MSD	Acceptance Criteria	Qualifier
2-chloroethyl vinyl ether	ND	ND	ND	130-70	VR
styrene	ND	7.75	ND	136-45	VR
vinyl acetate	ND	4.70	18.2	130-70	VQQ

- The SVOC by SW8270 MS/MSD percent recoveries were within laboratory acceptance limits, with the exception of benzidine, acenaphthylene, bis(2-chloroisopropyl) ether in sample 99GAMNVW001. One analyte was qualified as rejected (VR) due to 0% recovery, and two analytes were qualified with an estimated practical quantitation limit (VQQ).

Analyte	sample result ug/L	% recoveries MS	% recoveries MSD	Acceptance Criteria	Qualifier
benzidine	ND	ND	ND	178-1	VR
acenaphthylene	ND	41.9	41.1	126-56	VQQ
bis(2-chloroisopropyl) ether	ND	58.7	55.6	169-63	VQQ

- The percent difference between the cation and anion for sample 99GAMNVW201 exceeded the acceptable percent difference limit of +/- 2% with a percent difference of 4.89%. All other ion balances did met acceptance criteria.

Gambell
Complete Analytical Data

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMNVW001	03/26/1999	Gasoline Range Organics	ND	(0.10)	mg/l		AK101	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Diesel Range Organics	ND	(100)	ug/l		AK102	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Residual Range Organics	ND	(250)	ug/l		AK103	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1,1,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1,1-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1,2,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1,2-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,1-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2,3-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2,3-Trichloropropane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2,4-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2,4-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2-Dibromo-3-chloropropane	ND	(10)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2-Dibromoethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,3,5-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,3-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,3-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,4-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1-Chlorohexane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Butanone	ND	(5.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Chloroethyl vinyl ether	ND	(5.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Hexanone	ND	(5.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Isopropyltoluene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Methyl-2-pentanone	ND	(5.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Acetone	ND	(10)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Bromobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Bromochloromethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Bromodichloromethane	1.7	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Bromoform	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Bromomethane	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Carbon disulfide	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Carbon tetrachloride	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Chlorobenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Chloroethane	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Chloroform	1.0	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Chloromethane	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Dibromochloromethane	1.5	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Dibromomethane	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Dichlorodifluoromethane	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Ethylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Hexachlorobutadiene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Isopropylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Methylene chloride	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Naphthalene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Styrene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Tetrachloroethene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ

Flag Key: AZ Surr. recovery outside of acceptance limits due to matrix interf.
VQQ Val. Qual.: PQL approx. due to QC or matrix effects
VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMNVW001	03/26/1999	Toluene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Trichloroethene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Trichlorofluoromethane	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Vinyl acetate	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Vinyl chloride	ND	(2.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Xylenes	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	cis-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	cis-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	m,p-Xylene (Sum of Isomers)	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	n-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	n-Propylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	o-Xylene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	sec-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	tert-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	trans-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	trans-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2,4-Trichlorobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,2-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,3-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1,4-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	1-Chloronaphthalene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,4,5-Trichlorophenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,4,6-Trichlorophenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,4-Dichlorophenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,4-Dimethylphenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,4-Dinitrophenol	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,4-Dinitrotoluene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2,6-Dinitrotoluene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Chloronaphthalene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Chlorophenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Methyl-4,6-dinitrophenol	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Methylnaphthalene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Methylphenol (o-Cresol)	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Nitroaniline	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	2-Nitrophenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	3,3'-Dichlorobenzidine	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	3-Nitroaniline	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Bromophenyl phenyl ether	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Chloro-3-methylphenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Chloroaniline	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Chlorophenyl phenyl ether	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Methylphenol (p-Cresol)	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Nitroaniline	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	4-Nitrophenol	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Acenaphthene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Acenaphthylene	ND	(10)	ug/l	VQQ	SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Aniline	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Anthracene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Azobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzidine	ND	(100)	ug/l	VR	SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzo(a)anthracene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzo(a)pyrene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzo(b)fluoranthene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzo(g,h,i)perylene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzo(k)fluoranthene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzoic acid	ND	(50)	ug/l		SW8270	0636640002SA	QESZ

Flag Key: AZ Surr. recovery outside of acceptance limits due to matrix interf.
VQQ Val. Qual.: PQL approx. due to QC or matrix effects
VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMNVW001	03/26/1999	Benzyl alcohol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Benzyl butyl phthalate	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Carbazole	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Chrysene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Di-n-butyl phthalate	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Di-n-octyl phthalate	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Dibenzo(a,h)anthracene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Dibenzofuran	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Diethyl phthalate	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Dimethyl phthalate	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Fluoranthene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Fluorene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Hexachlorobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Hexachlorobutadiene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Hexachlorocyclopentadiene	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Hexachloroethane	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Indeno(1,2,3-cd)pyrene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Isophorone	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Naphthalene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Nitrobenzene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Pentachlorophenol	ND	(50)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Phenanthrene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Phenol	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Pyrene	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	Pyridine	ND	(20)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	bis(2-Chloroisopropyl)ether	ND	(10)	ug/l	VQQ	SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	bis-(2-Chloroethyl)ether	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	bis-(2-chloroethoxy)methane	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	bis-(2-ethylhexyl)phthalate	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	n-Nitrosodi-n-propylamine	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	n-Nitrosodimethylamine	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW001	03/26/1999	n-Nitrosodiphenylamine	ND	(10)	ug/l		SW8270	0636640002SA	QESZ
99GAMNVW201	03/26/1999	Gasoline Range Organics	ND	(0.10)	mg/l		AK101	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Diesel Range Organics	ND	(100)	ug/l		AK102	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Residual Range Organics	ND	(250)	ug/l		AK103	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1,1,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1,1-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1,2,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1,2-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,1-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2,3-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2,3-Trichloropropane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2,4-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2,4-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2-Dibromo-3-chloropropane	ND	(10)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2-Dibromoethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,3,5-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,3-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,3-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,4-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ

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VQQ Val. Qual.: PQL approx. due to QC or matrix effects
VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMNVW201	03/26/1999	1-Chlorohexane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Butanone	ND	(5.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Chloroethyl vinyl ether	ND	(5.0)	ug/l	VR	SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Hexanone	ND	(5.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Isopropyltoluene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Methyl-2-pentanone	ND	(5.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Acetone	ND	(10)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Bromobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Bromochloromethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Bromodichloromethane	1.7	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Bromoform	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Bromomethane	ND	(2.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Carbon disulfide	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Carbon tetrachloride	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Chlorobenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Chloroethane	ND	(2.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Chloroform	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Chloromethane	ND	(2.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Dibromochloromethane	1.4	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Dibromomethane	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Dichlorodifluoromethane	ND	(2.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Ethylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Hexachlorobutadiene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Isopropylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Methylene chloride	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Naphthalene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Styrene	ND	(1.0)	ug/l	VR	SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Tetrachloroethene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Toluene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Trichloroethene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Trichlorofluoromethane	ND	(2.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Vinyl acetate	ND	(2.0)	ug/l	VQQ	SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Vinyl chloride	ND	(2.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Xylenes	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	cis-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	cis-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	m,p-Xylene (Sum of Isomers)	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	n-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	n-Propylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	o-Xylene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	sec-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	tert-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	trans-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	trans-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2,4-Trichlorobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,2-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,3-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1,4-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	1-Chloronaphthalene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,4,5-Trichlorophenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,4,6-Trichlorophenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,4-Dichlorophenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ

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VQQ Val. Qual.: PQL approx. due to QC or matrix effects VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMNVW201	03/26/1999	2,4-Dimethylphenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,4-Dinitrophenol	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,4-Dinitrotoluene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2,6-Dinitrotoluene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Chloronaphthalene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Chlorophenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Methyl-4,6-dinitrophenol	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Methylnaphthalene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Methylphenol (o-Cresol)	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Nitroaniline	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	2-Nitrophenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	3,3'-Dichlorobenzidine	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	3-Nitroaniline	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Bromophenyl phenyl ether	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Chloro-3-methylphenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Chloroaniline	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Chlorophenyl phenyl ether	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Methylphenol (p-Cresol)	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Nitroaniline	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	4-Nitrophenol	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Acenaphthene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Acenaphthylene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Aniline	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Anthracene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Azobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzidine	ND	(100)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzo(a)anthracene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzo(a)pyrene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzo(b)fluoranthene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzo(g,h,i)perylene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzo(k)fluoranthene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzoic acid	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzyl alcohol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Benzyl butyl phthalate	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Carbazole	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Chrysene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Di-n-butyl phthalate	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Di-n-octyl phthalate	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Dibenzo(a,h)anthracene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Dibenzofuran	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Diethyl phthalate	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Dimethyl phthalate	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Fluoranthene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Fluorene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Hexachlorobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Hexachlorobutadiene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Hexachlorocyclopentadiene	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Hexachloroethane	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Indeno(1,2,3-cd)pyrene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Isophorone	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Naphthalene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Nitrobenzene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Pentachlorophenol	ND	(50)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Phenanthrene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Phenol	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	Pyrene	ND	(10)	ug/l		SW8270	0636640003SA	QESZ

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VQQ Val. Qual.: PQL approx. due to QC or matrix effects VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMNVW201	03/26/1999	Pyridine	ND	(20)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	bis(2-Chloroisopropyl)ether	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	bis-(2-Chloroethyl)ether	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	bis-(2-chloroethoxy)methane	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	bis-(2-ethylhexyl)phthalate	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	n-Nitrosodi-n-propylamine	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	n-Nitrosodimethylamine	ND	(9.6)	ug/l		SW8270	0636640003SA	QESZ
99GAMNVW201	03/26/1999	n-Nitrosodiphenylamine	ND	(10)	ug/l		SW8270	0636640003SA	QESZ
99GAMTAP001	03/26/1999	Gasoline Range Organics	ND	(0.10)	mg/l		AK101	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Diesel Range Organics	ND	(100)	ug/l		AK102	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Residual Range Organics	ND	(250)	ug/l		AK103	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1,1,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1,1-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1,2,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1,2-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,1-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2,3-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2,3-Trichloropropane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2,4-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2,4-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2-Dibromo-3-chloropropane	ND	(10)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2-Dibromoethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,3,5-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,3-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,3-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,4-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1-Chlorohexane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Butanone	ND	(5.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Chloroethyl vinyl ether	ND	(5.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Hexanone	ND	(5.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Isopropyltoluene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Methyl-2-pentanone	ND	(5.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Acetone	ND	(10)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Bromobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Bromochloromethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Bromodichloromethane	27	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Bromoform	11	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Bromomethane	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Carbon disulfide	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Carbon tetrachloride	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Chlorobenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Chloroethane	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Chloroform	14	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Chloromethane	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Dibromochloromethane	28	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Dibromomethane	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ

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VQQ Val. Qual.: PQL approx. due to QC or matrix effects VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMTAP001	03/26/1999	Dichlorodifluoromethane	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Ethylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Hexachlorobutadiene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Isopropylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Methylene chloride	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Naphthalene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Styrene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Tetrachloroethene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Toluene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Trichloroethene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Trichlorofluoromethane	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Vinyl acetate	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Vinyl chloride	ND	(2.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Xylenes	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	cis-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	cis-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	m,p-Xylene (Sum of Isomers)	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	n-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	n-Propylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	o-Xylene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	sec-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	tert-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	trans-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	trans-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2,4-Trichlorobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,2-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,3-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1,4-Dichlorobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	1-Chloronaphthalene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,4,5-Trichlorophenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,4,6-Trichlorophenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,4-Dichlorophenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,4-Dimethylphenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,4-Dinitrophenol	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,4-Dinitrotoluene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2,6-Dinitrotoluene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Chloronaphthalene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Chlorophenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Methyl-4,6-dinitrophenol	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Methylnaphthalene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Methylphenol (o-Cresol)	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Nitroaniline	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	2-Nitrophenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	3,3'-Dichlorobenzidine	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	3-Nitroaniline	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Bromophenyl phenyl ether	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Chloro-3-methylphenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Chloroaniline	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Chlorophenyl phenyl ether	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Methylphenol (p-Cresol)	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Nitroaniline	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	4-Nitrophenol	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Acenaphthene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Acenaphthylene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Aniline	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Anthracene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ

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Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMTAP001	03/26/1999	Azobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzidine	ND	(100)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzo(a)anthracene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzo(a)pyrene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzo(b)fluoranthene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzo(g,h,i)perylene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzo(k)fluoranthene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzoic acid	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzyl alcohol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Benzyl butyl phthalate	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Carbazole	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Chrysene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Di-n-butyl phthalate	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Di-n-octyl phthalate	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Dibenzo(a,h)anthracene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Dibenzofuran	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Diethyl phthalate	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Dimethyl phthalate	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Fluoranthene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Fluorene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Hexachlorobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Hexachlorobutadiene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Hexachlorocyclopentadiene	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Hexachloroethane	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Indeno(1,2,3-cd)pyrene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Isophorone	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Naphthalene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Nitrobenzene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Pentachlorophenol	ND	(51)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Phenanthrene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Phenol	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Pyrene	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	Pyridine	ND	(21)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	bis(2-Chloroisopropyl)ether	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	bis-(2-Chloroethyl)ether	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	bis-(2-chloroethoxy)methane	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	bis-(2-ethylhexyl)phthalate	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	n-Nitrosodi-n-propylamine	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	n-Nitrosodimethylamine	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTAP001	03/26/1999	n-Nitrosodiphenylamine	ND	(10)	ug/l		SW8270	0636640001SA	QESZ
99GAMTB032699	03/26/1999	Gasoline Range Organics	ND	(0.10)	mg/l		AK101	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1,1,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1,1-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1,2,2-Tetrachloroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1,2-Trichloroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,1-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2,3-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2,3-Trichloropropane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2,4-Trichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2,4-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2-Dibromo-3-chloropropane	ND	(10)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2-Dibromoethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ

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VR Val. Qual.: rejected value

Field Sample ID	Samp. Date	Parameter	Result	MRL	Units	Flag	Method	Lab Samp. No.	Lab
99GAMTB032699	03/26/1999	1,2-Dichloroethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,3,5-Trimethylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,3-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,3-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1,4-Dichlorobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	1-Chlorohexane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	2,2-Dichloropropane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	2-Butanone	ND	(5.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	2-Chloroethyl vinyl ether	ND	(5.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	2-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	2-Hexanone	ND	(5.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	4-Chlorotoluene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	4-Isopropyltoluene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	4-Methyl-2-pentanone	ND	(5.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Acetone	ND	(10)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Benzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Bromobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Bromochloromethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Bromodichloromethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Bromoform	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Bromomethane	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Carbon disulfide	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Carbon tetrachloride	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Chlorobenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Chloroethane	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Chloroform	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Chloromethane	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Dibromochloromethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Dibromomethane	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Dichlorodifluoromethane	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Ethylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Hexachlorobutadiene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Isopropylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Methylene chloride	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Naphthalene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Styrene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Tetrachloroethene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Toluene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Trichloroethene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Trichlorofluoromethane	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Vinyl acetate	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Vinyl chloride	ND	(2.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	Xylenes	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	cis-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	cis-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	m,p-Xylene (Sum of Isomers)	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	n-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	n-Propylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	o-Xylene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	sec-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	tert-Butylbenzene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	trans-1,2-Dichloroethene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ
99GAMTB032699	03/26/1999	trans-1,3-Dichloropropene	ND	(1.0)	ug/l		SW8260	0636640004SA	QESZ

Flag Key: AZ Surr. recovery outside of acceptance limits due to matrix interf.
VQQ Val. Qual.: PQL approx. due to QC or matrix effects
VR Val. Qual.: rejected value

M E M O R A N D U M

MONTGOMERY WATSON

To:	File- Field Notes	**Date:**	April 27, 1999
From:	Bonnie McLean	**Reference:**	1189098.040101
Subject:	Gambell Site 5,		DACA85-98-D-0007
	1999 Water Sampling		

The Alaska District contracted with Montgomery Watson on March 24, 1999 to collect groundwater samples from four monitoring wells (MW) constructed in 1998, the new village pumphouse, and the tap at the water treatment facility.

Bonnie McLean and Doug Quist traveled to Gambell, St. Lawrence Island , Alaska on March 25, 1999. The weather was extremely harsh, temperatures drove down to –54°F with the effect of 60 mph winds. The first task was to verify that the MWs could be sampled. All MWs were frozen solid. Top of ice measurements were completed from the outside steel protective casings and noted on the field forms. MW 29 was covered over with hard wind blown snow, only a short portion of the snow flag was visible making it inaccessible for measurements.

Arrangements were made to collect samples from the new village water well and the tap on Friday morning, March 26, 1999. It was learned that a return 1 ¼" line runs from the treatment facility back to the new pumphouse and discharges directly into the supply infiltration gallery. This returning water is post chlorination.

Samples were collected from the facility tap (post chlorination) (ID. 99 GAM TAP 001 sampled @ 1000) and from a tap at the new well house just as the water enters the supply piping (pre-chlorination) (ID. 99 GAM NVW 001 sampled @ 1100). A QC sample was also collected at this location (ID. 99 GAM NVW 201 sampled @ 1115). The trip blank for the GRO and VOC parameters had ID. 99 GAM TB 032699 @ 1900.

The samples were packed for transport as checked baggage and returned to Anchorage with the field team on March 26, 1999. Samples were placed directly into the Montgomery Watson lab refrigerator until they could be delivered to the lab on Monday, March 29, 1999 at 1150 am. (See C of C ID. 99 GAM 01).

Note: Sample 99 GAM NVW 001 and its duplicate contains diluted return chlorinated water.

Pumphouse

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

Pumphouse 99GAM NVW 001

SITE: New Village Well Sample ID #: _____ DATE: 3-26-99
SAMPLE TYPE: Grab FIELD CREW: Bjorn/DQ TIME Start: 1045 End 1200
WEATHER: SKY: Cloudy PRECIP: Snow WIND: 50 mph Air Temp. -4 -40 wc

GROUNDWATER : DEVELOPMENT _____ SAMPLING ✓

Well Condition: _____
Casing Ht. Above Ground: _____ (FT.) Diameter: _____ in.
Well Depth: _____ ft. BTOC (Meas./Rec.) Static Water Level: _____ ft. BTOC
Casing (C) = _____ Well ____ Outside Protective

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)= _____ gal.

PURGING:	~~Gallons~~ CO_2	~~Time~~ DO	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	41.5	9.8	~~[illegible]~~ RM	.528	5.19
Bailer					
Ded. Pump					
Suction Pump					
Direct TAP Pump #2					
(other)					

Back 11

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C: * _____ pH:* _____ Redox (eH): _____
Temp: _____ E.C: * _____ pH:* _____ Redox (eH): _____

CO_2 (10-50) Cont .3636 @ 415

SAMPLE COLLECTION

w/200 mL

Method: at faucet Appearance: clear

Analyte	Time	Analyte	Time	Analyte	Time
VOA 8260	✓ 1150	H2S		Alk.	✓
GRO ~~8015M~~	✓	NO3/NO2			
DRO/RR~~0 8100~~	✓	N2, CH4		ION	✓
METALS, T		TAH, PAH			
METALS, Dis.**		BetX	✓	PRODUCT	
TPH 418.1		SVOC	✓	Visosity	
PAH 8310		O-	✓	Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: ~~QA~~/QC Label ID: Split _____ Dupl. ✓ Trip Blank ✓ Other _____

** METALS FIELD FILTERED: _____ . PHOTO TAKEN # yes

Calibration/Standard: pH EC DO CO2

Decon completed: by date

REMARKS: Pumping 20 gpm. -

@1900 99GAMNVW TB03268

MS/MSD

@1115 99GAMNVW 201

TAP

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

99 GAm TAP 001

SITE: Treatment TAP Sample ID #: _____ DATE: 3-26-99
SAMPLE TYPE: grab FIELD CREW: Bgm/DQ TIME Start: 930 End 1030
WEATHER: SKY: cldy PRECIP: Dnow WIND: 50 mph Air Temp: -4 -40wc

GROUNDWATER : DEVELOPMENT _____ SAMPLING _____

Well Condition: _____
Casing Ht. Above Ground: _____(FT.) Diameter: _____in.
Well Depth: _____ft. BTOC (Meas./Rec.) Static Water Level: _____ft. BTOC
Casing (C) = _____ Well ____ Outside Protective

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)= _____gal.

PURGING:	~~Gallons~~ CO_2	~~Time~~ DO	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD	38	8.4		50.3	5.74
Bailer					
Ded. Pump					
Suction Pump					
TAP					
(other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____cfs (Est./Meas.)
Temp: _____ E.C: *_____ pH:*_____ Redox (eH): _____
Temp: _____ E.C: *_____ pH:*_____ Redox (eH): _____

CO_2 (10-50) Cont. .3636 0.1 @38
w/ 200 mg

SAMPLE COLLECTION

Method: _____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
~~VOA 8260~~ SVOC	1050	H2S			
GRO ~~8015M~~	v	NO3/NO2		Alk	✓
DRO/RR0 ~~8100~~	✓	N2, CH4			
METALS, T		TAH, PAH		Ion Balance	✓
METALS, Dis.**		Btx	✓	PRODUCT	
TPH 418.1				Visosity	
PAH 8310		Cl	✓	Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: QA/QC Label ID: Split_____ Dupl. ✓ Trip Blank_____ Other_____
** METALS FIELD FILTERED: _____. PHOTO TAKEN #_____
Calibration/Standard: pH 4 & 7 EC DO CO2
Decon completed: by date
REMARKS: Pumping 20 gpm - low Vol. Pulling Turb. / silt into well.

[redacted]

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

SITE: MW28 Sample ID #: N/A DATE: 3-25-99
SAMPLE TYPE: N/A FIELD CREW: [illegible] DQ TIME Start: 1200 End 1205
WEATHER: SKY: _____ PRECIP: Blowing Snow WIND: 50 mph Air Temp. 0 -40 WC

GROUNDWATER : DEVELOPMENT _____ SAMPLING _____

Well Condition: secured
Casing Ht. Above Ground: 3.20 (FT.) Diameter: 4 in.
Well Depth: 16.2 ft. BTOC (~~Meas.~~/Rec.) ~~Static Water~~ Level: 13.16 ft. BTOC
Casing (C) = _____ Well ✓ Outside Protective Ice outside

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)=_____gal.

PURGING: METHOD	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
Bailer					
Ded. Pump					
Suction Pump					
_____ (other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth:_____ Width:_____ Velocity:_____ Flow:_____cfs (Est./Meas.)
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____

SAMPLE COLLECTION

Method:_____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
VOA 8260		H2S			
GRO 8015M		NO3/NO2			
DRO/RR0 8100		N2, CH4			
METALS, T		TAH, PAH			
METALS, Dis.**				PRODUCT	
TPH 418.1				Visosity	
PAH 8310				Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: QA/QC Label ID: Split_____ Dupl._____ Trip Blank_____ Other_____
** METALS FIELD FILTERED: _____ . PHOTO TAKEN #_____
Calibration/Standard: pH EC DO CO2
Decon completed: by date
REMARKS:

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

SITE: MW29 Sample ID #: N/A DATE: 3-26-99
SAMPLE TYPE: N/A FIELD CREW: Bgm/DQ TIME Start: 1205 End 1215
WEATHER: SKY: cldy PRECIP: blowing snow WIND: 30 mph Air Temp. 0

GROUNDWATER : DEVELOPMENT _____ SAMPLING _____ -40 WC

Well Condition: _____
Casing Ht. Above Ground: _____ (FT.) Diameter: 4 in.
Well Depth: 15.9 ft. BTOC (~~Meas.~~/Rec.) Static Water Level: Covered BTOC with Ice & Snow
Casing (C) = _____ Well ____ Outside Protective

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)= _____ gal.

PURGING: METHOD	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
Bailer					
Ded. Pump					
Suction Pump					
_____ (other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth: _____ Width: _____ Velocity: _____ Flow: _____ cfs (Est./Meas.)
Temp: _____ E.C: * _____ pH:* _____ Redox (eH): _____
Temp: _____ E.C: * _____ pH:* _____ Redox (eH): _____

SAMPLE COLLECTION

Method: _____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
VOA 8260		H2S			
GRO 8015M		NO3/NO2			
DRO/RR0 8100		N2, CH4			
METALS, T		TAH, PAH			
METALS, Dis.**				PRODUCT	
TPH 418.1				Visosity	
PAH 8310				Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: QA/QC Label ID: Split _____ Dupl. _____ Trip Blank _____ Other _____
** METALS FIELD FILTERED: _____ . PHOTO TAKEN # _____
Calibration/Standard: pH EC DO CO2
Decon completed: by date
REMARKS: Covered by 4' hard packed wind blown snow.

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

SITE: MW30 Sample ID #: D/A DATE: 3-25-95
SAMPLE TYPE: D/A FIELD CREW: Bgm/DP TIME Start: 1225 End 1235
WEATHER: SKY: cldy PRECIP Blowing snow WIND: 30 mph Air Temp. 0 -40 LR

GROUNDWATER : DEVELOPMENT _____ SAMPLING _____

Well Condition: secured
Casing Ht. Above Ground: 2.7 (FT.) Diameter: 4 in.
Well Depth: 12.7 ft. BTOC (~~Meas~~/Rec.) Static ~~Water~~ Level: 10.80 ft. BTOC
Casing (C) = _____ Well ✓ Outside Protective tce outside

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)=_____gal.

PURGING: METHOD	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
Bailer					
Ded. Pump					
Suction Pump					
_____ (other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth:_____ Width:_____ Velocity:_____ Flow:_____cfs (Est./Meas.)
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____

SAMPLE COLLECTION

Method:_____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
VOA 8260		H2S			
GRO 8015M		NO3/NO2			
DRO/RR0 8100		N2, CH4			
METALS, T		TAH, PAH			
METALS, Dis.**				PRODUCT	
TPH 418.1				Visosity	
PAH 8310				Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: QA/QC Label ID: Split_____ Dupl._____ Trip Blank_____ Other_____
** METALS FIELD FILTERED: _____ . PHOTO TAKEN #_____
Calibration/Standard: pH EC DO CO2
Decon completed: by date
REMARKS:

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

SITE: MW 31 Sample ID #: N/A DATE: 3-25-99
SAMPLE TYPE: N/A FIELD CREW: Bgn-DQ TIME Start: 1215 End 1220
WEATHER: SKY: Cldy PRECIP: blowing/snow WIND: 50 mph Air Temp. 0 -40 wc

GROUNDWATER : DEVELOPMENT _____ SAMPLING _____

Well Condition: Secured
Casing Ht. Above Ground: 2.8 (FT.) Diameter: 4 in.
Well Depth: 14.3 ft. BTOC (~~Meas.~~/Rec.) Static Water Level: 12.55 ft. BTOC
Casing (C) = _____ Well ✓ Outside Protective Frozen Ice outside

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)=_____gal.

PURGING: METHOD	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
Bailer					
Ded. Pump					
Suction Pump					
_____ (other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth:_____ Width:_____ Velocity:_____ Flow:_____cfs (Est./Meas.)
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____

SAMPLE COLLECTION

Method:_____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
VOA 8260		H2S			
GRO 8015M		NO3/NO2			
DRO/RR0 8100		N2, CH4			
METALS, T		TAH, PAH			
METALS, Dis.**				PRODUCT	
TPH 418.1				Visosity	
PAH 8310				Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: QA/QC Label ID: Split_____ Dupl._____ Trip Blank_____ Other_____
** METALS FIELD FILTERED: _____ . PHOTO TAKEN #_____
Calibration/Standard: pH EC DO CO2
Decon completed: by date
REMARKS:

WATER SAMPLING/DELELOPMENT
FIELD NOTE FORM

Gambell SJ to S

SITE: MW32 Sample ID #: DIA DATE: 3-25-99
SAMPLE TYPE: grab FIELD CREW: Bom DG TIME Start: 1230 End 1245
WEATHER: SKY: Cldy PRECIP: blowing snow WIND: 52 mph Air Temp. C -55 WC

GROUNDWATER : DEVELOPMENT _____ SAMPLING _____

Well Condition: Secured
Casing Ht. Above Ground: 3.1 (FT.) Diameter: 4 in.
Well Depth: 16.1 ft. BTOC (Meas./Rec.) Static Water Level: 15.65 ft. BTOC
Casing (C) = _____ Well ____ Outside Protective Ice outside

ONE PURGE VOLUME: 7.48 x (dia./24)^2 x 3.14 x (Depth-W. L.)=_____gal.

PURGING:	Gallons	Time	Temperature °C	E.C. (µmhos/cm)*	pH*
METHOD					
Bailer					
Ded. Pump					
Suction Pump					
_____ (other)					

* TEMP. CORRECTED @ 25C

SURFACE WATER

Channel Depth:_____ Width:_____ Velocity:_____ Flow:_____cfs (Est./Meas.)
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____
Temp: _____ E.C: *_____ pH:*_____ Redox (eH):_____

SAMPLE COLLECTION

Method:_____ Appearance: _____

Analyte	Time	Analyte	Time	Analyte	Time
VOA 8260		H2S			
GRO 8015M		NO3/NO2			
DRO/RR0 8100		N2, CH4			
METALS, T		TAH, PAH			
METALS, Dis.**				PRODUCT	
TPH 418.1				Visosity	
PAH 8310				Density	
TDS,Alk,Cl, SO4				Interfacial Tension	

COMMENTS: QA/QC Label ID: Split_____ Dupl._____ Trip Blank_____ Other_____

** METALS FIELD FILTERED: _____. PHOTO TAKEN #_____

Calibration/Standard: pH EC DO CO2

Decon completed: by date

REMARKS:

MONTGOMERY WATSON

Montgomery Watson
4100 Spenard Road
Anchorage AK 99517
(907)248-8883
Fax (907) 248-8884
ATTN: Eileen Maus

Laboratory:
Quanterra, Inc
5761 Silverado Way
Anchorage, Ak 99502
907-563-4800
907-563-4815 FAX
Attn: Cindy LeFerer

MW Job Number:
1189098.040101
14-DAY
TURNAROUND

Sampler's Signature: [signature]

COC # 99 GAM01

WATER

1999 Date	Time	Sample ID	Matrix	Containers	* DRO/RRO - AK 102/103 2- 1 L. Amber w/HCl	* GRO/BTEX - AK101/EPA 8021b 3- 40 ml vivals w/HCl	* VOC,EPA 8260, 3- 40 ml. vivals w/HCl	* SVOC, EPA 8270, 2- 1.1 amber	1l. Alk	1l. CL⁻ Ion Balance	Comments: * MS/MSD (No MS/MSD)	
3-26	1000	99 GAM TAP 001	W	12	✓	✓	✓	✓	✓	✓		
3-26	1100	99 GAM NVW 001	W	32	✓	✓	✓	✓	✓	✓		*
3-26	1115	99 GAM NVW 201	W	12	✓	✓	✓	✓	✓	✓		
3-26	1900	99 GAM TB032699	W	6		✓	✓					
		99 GAM										
		99 GAM										
		99 GAM										
		99 GAM										

JS 3/29/98

Relinquished by: [signature]	Date 3-29-99 Time 1150	Airbill Number: hand delivered by client	Date 3/29/99 Time 11 30 JS
Received for Laboratory by: Jayne A Smith	Date 3-29-99 Time 1:50	Laboratory Notified temp. 2.6°, 3.1°, 3.3° Faxed	

3/24/99 11:03 AM

QA/QC for USCOE

Project Name Gambell Site 5
Project Number _____

Date: 3-26-99	COC:	Completed By:		
Primary	~~Replicate~~	~~Duplicate~~ Split	Parameters	
99GAmNVW001	99	GAmNVW001	BetX	GRO
			DRO	RRO
			SVOC	CC-1
			VC	Lit.
				Tin Pellets

Trip Blank-P	Trip Blank-S		Trip Blank Date	
99GAm 0326	99		032699	BTEX
				GRO
				VOC

Rinsate-P	Rinsate-S	Sample Type	Sample Prior	Sample After

Quanterra Environmental Services

Quanterra Incorporated
5761 Silverado Way, Suite N
Anchorage, Alaska 99518

907-563-4800 Telephone
907-563-4815 Fax

April 14, 1999

Ms. Eileen Maus
Montgomery Watson Americas, Inc.
4100 Spenard Road
Anchorage, AK 99517-2901

Site 5 Gambell, St. Lawrence Island, Alaska

Dear Ms. Maus:

Enclosed with this letter is the report containing the analytical results for the project specified above.

Report data sheets contain a list of the requested constituents measured in each test, the analytical results, the reporting limits, and regulatory limits (where appropriate). Reporting limits are adjusted to reflect any dilution or dry weight correction, when applicable

If you have any questions regarding the data provided in this report, please contact Lucinda LeFever at (907) 265-8128 or Emanuel Hignutt, Laboratory Manager, at (907) 265-8167.

Sincerely,

Lucinda L. LeFever
Analytical Project Manager II

LLL
Enclosure
cc: LIMS Projects File #063664

Quanterra

SITE 5 GAMBELL, ST. LAWRENCE ISLAND, ALASKA
PROJECT 063664
TABLE OF CONTENTS

SITE 5 GAMBELL, ST. LAWRENCE ISLAND, ALASKA
PROJECT 063664
NARRATIVE

I. CONDITION UPON RECEIPT

The sample coolers were received with custody seals intact and within acceptable temperature range.

All sample containers were received intact.

Samples were received in time to meet the method holding time specifications.

8021 BTEX analysis canceled per client request.

II. VOLATILE ORGANIC ANALYSES

Volatile Organics by EPA Method SW8260

Quality Control Results

The RPD for bromomethane in the matrix spike and matrix spike duplicate for sample 99GAMNVW201 was outside of control limits.

The recovery of vinyl acetate and styrene in the matrix spike and matrix spike duplicate for sample 99GAMNVW201 were outside of control limits.

All other quality control results were within method- and/or project –specific limits.

Sample Results

There were not any anomalies associated with the sample analysis.

Gasoline Range Organics by Method AK101

Quality Control Results

All quality control results were within method- and/or project –specific limits.

Sample Results

There were not any anomalies associated with the sample analysis.

III. SEMI-VOLATILE ORGANIC ANALYSES

Diesel Range Organics by Method AK102

Quality Control Results

All quality control results were within method- and/or project –specific limits.

Sample Results

There were not any anomalies associated with the sample analysis.

Residual Range Organics by Method AK103

Quality Control Results

All quality control results were within method- and/or project –specific limits.

SITE 5 GAMBELL, ST. LAWRENCE ISLAND, ALASKA
PROJECT 063664
NARRATIVE

Sample Results

There were not any anomalies associated with the sample analysis.

Semi-volatile Organics by EPA Method SW8270

Quality Control Results

The recovery of acenaphthylene and bis-(2-chloroisopropyl)ether in the matrix spike and matrix spike duplicate for sample 99GAMNVW001 was outside of control limits.

All other quality control results were within method- and/or project –specific limits.

Sample Results

The recovery of phenol-d5 for samples 99GAMNVW001 and 99GAMNVW201 were outside of laboratory acceptance limits due to matrix interference.

There were not any other anomalies associated with the sample analysis.

Laboratory Report Project Overview

EDF 1 2a

Laboratory:	Quanterra Environmental Services, Anchorage, AK
Lab Report Number:	063664
Project Name:	Gambell Site 5 RI
Work Order Number:	98-093
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
063664	99GAMNVW001	0636640002SA	WG	CS	AK101	SW5030	03/26/1999	03/31/1999	03/31/1999	A990331N1	1
063664	99GAMNVW001	0636640002SA	WG	CS	AK102	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1
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063664	99GAMNVW201	0636640003SA	WG	CS	AK101	SW5030	03/26/1999	03/31/1999	03/31/1999	A990331N1	1
063664	99GAMNVW201	0636640003SA	WG	CS	AK102	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1
063664	99GAMNVW201	0636640003SA	WG	CS	AK103	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1
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063664	99GAMTAP001	0636640001SA	WG	CS	AK103	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1
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063664	99GAMTB032699	0636640004SA	WG	CS	SW8260	SW5030	03/26/1999	03/30/1999	03/30/1999	A990330F	1
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Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
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		BS9904051	WQ	BS1	SW8270	SW3510	/ /	04/01/1999	04/05/1999	A9904011	1
		LB990330B	WQ	LB1	AK102	SW3510	/ /	03/30/1999	03/31/1999	A9903301	1
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		0636640002SD	WG	SD1	AK101	SW5030	/ /	03/31/1999	03/31/1999	A990331N1	1
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Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
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Npdlcl: Error Summary Log

04/14/1999

Error type	Clrevdate	Anmcode	Exmcode	Parlabel	Clcode
There are no errors in this data file	/ /				

Error Summary Log

04/14/1999

EDF 1.2aAll files present in deliverable.

Laboratory:	Quanterra Environmental Services, Anchorage, AK
Lab Report Number:	063664
Project Name:	Gambell Site 5 RI
Work Order Number:	98-093
Control Sheet Number:	NA

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Labloicti	Run	Sub
063664	99GAMNVW001	0636640002SA	WG	CS	AK101	SW5030	03/26/1999	03/31/1999	03/31/1999	A990331N1	1	
063664	99GAMNVW001	0636640002SA	WG	CS	AK102	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1	
063664	99GAMNVW001	0636640002SA	WG	CS	AK103	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1	
063664	99GAMNVW001	0636640002SA	WG	CS	SW8260	SW5030	03/26/1999	03/30/1999	03/30/1999	A990330F	1	
063664	99GAMNVW001	0636640002SA	WG	CS	SW8270	SW3510	03/26/1999	04/01/1999	04/05/1999	A9904011	1	
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063664	99GAMNVW201	0636640003SA	WG	CS	AK102	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1	
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063664	99GAMTAP001	0636640001SA	WG	CS	AK102	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1	
063664	99GAMTAP001	0636640001SA	WG	CS	AK103	SW3510	03/26/1999	03/30/1999	03/30/1999	A9903301	1	
063664	99GAMTAP001	0636640001SA	WG	CS	SW8260	SW5030	03/26/1999	03/30/1999	03/30/1999	A990330F	1	
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Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Extmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
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Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run Sub
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Npdlsamp: Error Summary Log

04/14/1999

Error type	Logcode	Projname	Npdlwo	Sampid	Matrix
There are no errors in this data file					

Npdltest: Error Summary Log

04/14/1999

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					/ /	0

Npdlres: Error Summary Log

04/14/1999

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Warning: extra parameter	0636640001SA	CS	WG	SW8260	PR	03/30/1999	1	CLHX1
Warning: extra parameter	0636640001SA	CS	WG	SW8260	PR	03/30/1999	1	FC113
Warning: extra parameter	0636640001SA	CS	WG	SW8260	PR	03/30/1999	1	VA
Warning: extra parameter	0636640001SA	CS	WG	SW8260	PR	03/30/1999	1	XYLENES
Warning: extra parameter	0636640001SA	CS	WG	SW8260	PR	03/30/1999	1	XYLMP
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Error ty	Labsampid	Qccode	trix	Anmcode	Pvccode	Anadate	Run number	Parlabe
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Error ty	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabe
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Warning: extra parameter	0636640003MS	MS1	WG	SW8260	PR	03/30/1999	1	FC113
Warning: extra parameter	0636640003MS	MS1	WG	SW8260	PR	03/30/1999	1	VA
Warning: extra parameter	0636640003MS	MS1	WG	SW8260	PR	03/30/1999	1	XYLENES
Warning: extra parameter	0636640003MS	MS1	WG	SW8260	PR	03/30/1999	1	XYLMP
Warning: extra parameter	0636640003SA	CS	WG	AK101	PR	03/31/1999	1	BR4FBZ
Warning: extra parameter	0636640003SA	CS	WG	AK101	PR	03/31/1999	1	TFBZME
Warning: extra parameter	0636640003SA	CS	WG	AK102	PR	03/30/1999	1	PHENO
Warning: extra parameter	0636640003SA	CS	WG	AK103	PR	03/30/1999	1	638-68-6
Warning: extra parameter	0636640003SA	CS	WG	SW8260	PR	03/30/199	1	CEVETH

Error t	Labsampid	Qccode	stnx	Anmcode	Pvccode	Anadate	Run number	Parlab
						9		
Warning: extra parameter	0636640003SA	CS	WG	SW8260	PR	03/30/199 9	1	CLHX1
Warning: extra parameter	0636640003SA	CS	WG	SW8260	PR	03/30/199 9	1	FC113
Warning: extra parameter	0636640003SA	CS	WG	SW8260	PR	03/30/199 9	1	VA
Warning: extra parameter	0636640003SA	CS	WG	SW8260	PR	03/30/199 9	1	XYLENES
Warning: extra parameter	0636640003SA	CS	WG	SW8260	PR	03/30/199 9	1	XYLMP
Warning: extra parameter	0636640003SA	CS	WG	SW8270	PR	04/05/199 9	1	AZOBENZENE
Warning: extra parameter	0636640003SA	CS	WG	SW8270	PR	04/05/199 9	1	CARBAZOLE
Warning: extra parameter	0636640003SA	CS	WG	SW8270	PR	04/05/199 9	1	PYRDN
Warning: extra parameter	0636640003SD	SD1	WG	SW8260	PR	03/30/199 9	1	CEVETH
Warning: extra parameter	0636640003SD	SD1	WG	SW8260	PR	03/30/199 9	1	CLHX1
Warning: extra parameter	0636640003SD	SD1	WG	SW8260	PR	03/30/199 9	1	FC113
Warning: extra parameter	0636640003SD	SD1	WG	SW8260	PR	03/30/199 9	1	VA
Warning: extra parameter	0636640003SD	SD1	WG	SW8260	PR	03/30/199 9	1	XYLENES
Warning: extra parameter	0636640003SD	SD1	WG	SW8260	PR	03/30/199 9	1	XYLMP
Warning: extra parameter	0636640004SA	CS	WG	AK101	PR	03/31/199 9	1	BR4FBZ
Warning: extra parameter	0636640004SA	CS	WG	AK101	PR	03/31/199 9	1	TFBZME
Warning: extra parameter	0636640004SA	CS	WG	SW8260	PR	03/30/199 9	1	CEVETH

Error ty	Labsampid	Qccode	atrix	Anmcode	Pvccode	Anadate	Run number	Parlab
Warning: extra parameter	0636640004SA	CS	WG	SW8260	PR	03/30/1999	1	CLHX1
Warning: extra parameter	0636640004SA	CS	WG	SW8260	PR	03/30/1999	1	FC113
Warning: extra parameter	0636640004SA	CS	WG	SW8260	PR	03/30/1999	1	VA
Warning: extra parameter	0636640004SA	CS	WG	SW8260	PR	03/30/1999	1	XYLENES
Warning: extra parameter	0636640004SA	CS	WG	SW8260	PR	03/30/1999	1	XYLMP
Warning: extra parameter	BD9903301	BD1	WQ	AK102	PR	03/31/1999	1	PHENO
Warning: extra parameter	BD9903301	BD1	WQ	AK103	PR	03/30/1999	1	638-68-6
Warning: extra parameter	BD990331N1	BD1	WQ	AK101	PR	03/31/1999	1	BR4FBZ
Warning: extra parameter	BD990331N1	BD1	WQ	AK101	PR	03/31/1999	1	TFBZME
Warning: extra parameter	BS9903301	BS1	WQ	AK102	PR	03/31/1999	1	PHENO
Warning: extra parameter	BS9903301	BS1	WQ	AK103	PR	03/30/1999	1	638-68-6
Warning: extra parameter	BS990330F	BS1	WQ	SW8260	PR	03/30/1999	1	CEVETH
Warning: extra parameter	BS990330F	BS1	WQ	SW8260	PR	03/30/1999	1	CLHX1
Warning: extra parameter	BS990330F	BS1	WQ	SW8260	PR	03/30/1999	1	FC113
Warning: extra parameter	BS990330F	BS1	WQ	SW8260	PR	03/30/1999	1	VA
Warning: extra parameter	BS990330F	BS1	WQ	SW8260	PR	03/30/1999	1	XYLENES
Warning: extra parameter	BS990330F	BS1	WQ	SW8260	PR	03/30/1999	1	XYLMP
Warning: extra parameter	BS990331N1	BS1	WQ	AK101	PR	03/31/199	1	BR4FBZ

Error ty	Labsampid	Qccode	Mtx	Anmcode	Pvccode	Anadate	Run number	Parlabl
						9		
Warning: extra parameter	BS990331N1	BS1	WQ	AK101	PR	03/31/1999	1	TFBZME
Warning: extra parameter	BS9904051	BS1	WQ	SW8270	PR	04/05/1999	1	AZOBENZENE
Warning: extra parameter	BS9904051	BS1	WQ	SW8270	PR	04/05/1999	1	CARBAZOLE
Warning: extra parameter	BS9904051	BS1	WQ	SW8270	PR	04/05/1999	1	PYRDN
Warning: extra parameter	LB990330B	LB1	WQ	AK102	PR	03/31/1999	1	PHENO
Warning: extra parameter	LB990330B	LB1	WQ	AK103	PR	03/30/1999	1	638-68-6
Warning: extra parameter	LB990330F	LB1	WQ	SW8260	PR	03/30/1999	1	CEVETH
Warning: extra parameter	LB990330F	LB1	WQ	SW8260	PR	03/30/1999	1	CLHX1
Warning: extra parameter	LB990330F	LB1	WQ	SW8260	PR	03/30/1999	1	FC113
Warning: extra parameter	LB990330F	LB1	WQ	SW8260	PR	03/30/1999	1	VA
Warning: extra parameter	LB990330F	LB1	WQ	SW8260	PR	03/30/1999	1	XYLENES
Warning: extra parameter	LB990330F	LB1	WQ	SW8260	PR	03/30/1999	1	XYLMP
Warning: extra parameter	LB990331N1	LB1	WQ	AK101	PR	03/31/1999	1	BR4FBZ
Warning: extra parameter	LB990331N1	LB1	WQ	AK101	PR	03/31/1999	1	TFBZME
Warning: extra parameter	LB9904051	LB1	WQ	SW8270	PR	04/05/1999	1	AZOBENZENE
Warning: extra parameter	LB9904051	LB1	WQ	SW8270	PR	04/05/1999	1	CARBAZOLE
Warning: extra parameter	LB9904051	LB1	WQ	SW8270	PR	04/05/1999	1	PYRDN

Npdlqc: Error Summary Log

04/14/1999

Error type	Lablotctl	Anmcode	Parlabel	Qccode	Labqcid
There are no errors in this data files					

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

Project Name:	Gambell Site 5 RI	Analysis:	Gasoline Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK101
		Prep Meth:	SW5030

Field ID:	99GAMNVW001	Lab Samp ID:	0636640002SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/31/1999
Sample Time:	1100	Analysis Date:	03/31/1999
Matrix:	Ground Water	QC Batch:	A990331N1
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	0.040	0.10	PQL		ND	MG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		50-150	SLSA		84%		1.0
Trifluorotoluene		50-150	SLSA		89%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Gasoline Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK101
		Prep Meth:	SW5030

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/31/1999
Sample Time:	1115	Analysis Date:	03/31/1999
Matrix:	Ground Water	QC Batch:	A990331N1
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	0.040	0.10	PQL		ND	MG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		50-150	SLSA		84%		1.0
Trifluorotoluene		50-150	SLSA		88%		1.0

Approved by: _____ Date:

Project Name:	Gambell Site 5 RI	Analysis:	Gasoline Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK101
		Prep Meth:	SW5030

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/31/1999
Sample Time:	1000	Analysis Date:	03/31/1999
Matrix:	Ground Water	QC Batch:	A990331N1
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	0.040	0.10	PQL		ND	MG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		50-150	SLSA		81%		1.0
Trifluorotoluene		50-150	SLSA		87%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Gasoline Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK101
		Prep Meth:	SW5030

Field ID:	99GAMTB032699	Lab Samp ID:	0636640004SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/31/1999
Sample Time:	1900	Analysis Date:	03/31/1999
Matrix:	Ground Water	QC Batch:	A990331N1
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	0.040	0.10	PQL		ND	MG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		50-150	SLSA		83%		1.0
Trifluorotoluene		50-150	SLSA		88%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Diesel Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK102
		Prep Meth:	SW3510

Field ID:	99GAMNVW001	Lab Samp ID:	0636640002SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1100	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A9903301
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Range Organics	15.	100.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
o-Terphenyl		50-150	SLSA		82%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Diesel Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK102
		Prep Meth:	SW3510

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1115	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A9903301
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Range Organics	15.	100.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
o-Terphenyl		50-150	SLSA		73%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Diesel Range Organics, Alaska Dept. of
Project No:	98-093	Method:	AK102
		Prep Meth:	SW3510

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1000	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A9903301
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Range Organics	15.	100.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
o-Terphenyl		50-150	SLSA		79%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	State of Alaska Residual Range Hydrocarbons
Project No:	98-093	Method:	AK103
		Prep Meth:	SW3510

Field ID:	99GAMNVW001	Lab Samp ID:	0636640002SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1100	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A9903301
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Residual Range Organics	23.	250.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Tricontane		50-150	SLSA		78%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	State of Alaska Residual Range Hydrocarbons
Project No:	98-093	Method:	AK103
		Prep Meth:	SW3510

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1115	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A9903301
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Residual Range Organics	23.	250.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Tricontane		50-150	SLSA		72%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	State of Alaska Residual Range Hydrocarbons
Project No:	98-093	Method:	AK103
		Prep Meth:	SW3510

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1000	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A9903301
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Residual Range Organics	23.	250.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Tricontane		50-150	SLSA		78%		1.0

Approved by: _____ Date: _____

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Volatile Organic Compounds by GC/MS
Method: SW8260
Prep Meth: SW5030

Field ID: 99GAMNVW001
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1100
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640002SA
Rec'd Date: 03/29/1999
Prep Date: 03/30/1999
Analysis Date: 03/30/1999
QC Batch: A990330F
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acetone	1.2	10.	PQL		ND	UG/L	1.0
Benzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromochloromethane	0.17	1.0	PQL		ND	UG/L	1.0
Bromodichloromethane	0.15	1.0	PQL		1.7	UG/L	1.0
Bromoform	0.11	1.0	PQL		ND	UG/L	1.0
2-Butanone	1.7	5.0	PQL		ND	UG/L	1.0
Bromomethane	0.74	2.0	PQL		ND	UG/L	1.0
n-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
sec-Butylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
tert-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Carbon disulfide	0.17	1.0	PQL		ND	UG/L	1.0
Carbon tetrachloride	0.27	1.0	PQL		ND	UG/L	1.0
Chlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Dibromochloromethane	0.10	1.0	PQL		1.5	UG/L	1.0
Chloroethane	0.17	2.0	PQL		ND	UG/L	1.0
Chloroform	0.10	1.0	PQL		1.0	UG/L	1.0
Chloromethane	0.49	2.0	PQL		ND	UG/L	1.0
2-Chlorotoluene	0.11	1.0	PQL		ND	UG/L	1.0
4-Chlorotoluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2-Dibromo-3-chloropropane	0.40	10.	PQL		ND	UG/L	1.0
1,2-Dibromoethane	0.10	1.0	PQL		ND	UG/L	1.0
Dibromomethane	0.20	1.0	PQL		ND	UG/L	1.0
1,2-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	0.12	1.0	PQL		ND	UG/L	1.0
Dichlorodifluoromethane	0.20	2.0	PQL		ND	UG/L	1.0
1,1-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,2-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,1-Dichloroethene	0.23	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Volatile Organic Compounds by GC/MS
Method: SW8260
Prep Meth: SW5030

Field ID: 99GAMNVW001
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1100
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640002SA
Rec'd Date: 03/29/1999
Prep Date: 03/30/1999
Analysis Date: 03/30/1999
QC Batch: A990330F
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
cis-1,2-Dichloroethene	0.22	1.0	PQL		ND	UG/L	1.0
trans-1,2-Dichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
1,2-Dichloropropane	0.12	1.0	PQL		ND	UG/L	1.0
1,3-Dichloropropane	0.13	1.0	PQL		ND	UG/L	1.0
2,2-Dichloropropane	0.18	1.0	PQL		ND	UG/L	1.0
1,1-Dichloropropene	0.17	1.0	PQL		ND	UG/L	1.0
cis-1,3-Dichloropropene	0.10	1.0	PQL		ND	UG/L	1.0
trans-1,3-Dichloropropene	0.090	1.0	PQL		ND	UG/L	1.0
Ethylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Hexachlorobutadiene	0.16	1.0	PQL		ND	UG/L	1.0
2-Hexanone	0.40	5.0	PQL		ND	UG/L	1.0
Isopropylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
4-Isopropyltoluene	0.10	1.0	PQL		ND	UG/L	1.0
Methylene chloride	0.11	1.0	PQL		ND	UG/L	1.0
4-Methyl-2-pentanone	0.83	5.0	PQL		ND	UG/L	1.0
Naphthalene	0.21	1.0	PQL		ND	UG/L	1.0
n-Propylbenzene	0.12	1.0	PQL		ND	UG/L	1.0
Styrene	0.10	1.0	PQL		ND	UG/L	1.0
1,1,1,2-Tetrachloroethane	0.10	1.0	PQL		ND	UG/L	1.0
1,1,2,2-Tetrachloroethane	0.17	1.0	PQL		ND	UG/L	1.0
Tetrachloroethene	0.11	1.0	PQL		ND	UG/L	1.0
Toluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2,3-Trichlorobenzene	0.17	1.0	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	0.19	1.0	PQL		ND	UG/L	1.0
1,1,1-Trichloroethane	0.13	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloroethane	0.16	1.0	PQL		ND	UG/L	1.0
Trichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
Trichlorofluoromethane	0.14	2.0	PQL		ND	UG/L	1.0
1,2,3-Trichloropropane	0.33	1.0	PQL		ND	UG/L	1.0
1,2,4-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMNVW001	Lab Samp ID:	0636640002SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1100	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,3,5-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
Vinyl chloride	0.19	2.0	PQL		ND	UG/L	1.0
o-Xylene	0.10	1.0	PQL		ND	UG/L	1.0
2-Chloroethyl vinyl ether	0.17	5.0	PQL		ND	UG/L	1.0
1-Chlorohexane	0.11	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.11	1.0	PQL		ND	UG/L	1.0
Vinyl acetate	0.41	2.0	PQL		ND	UG/L	1.0
Xylenes	0.18	1.0	PQL		ND	UG/L	1.0
m,p-Xylene (Sum of Isomers)	0.13	1.0	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		87-117	SLSA		107%		1.0
Toluene-d8		88-118	SLSA		98%		1.0
Dibromofluoromethane		70-130	SLSA		104%		1.0
1,2-Dichloroethane-d4		79-112	SLSA		99%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1115	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acetone	1.2	10.	PQL		ND	UG/L	1.0
Benzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromochloromethane	0.17	1.0	PQL		ND	UG/L	1.0
Bromodichloromethane	0.15	1.0	PQL		1.7	UG/L	1.0
Bromoform	0.11	1.0	PQL		ND	UG/L	1.0
2-Butanone	1.7	5.0	PQL		ND	UG/L	1.0
Bromomethane	0.74	2.0	PQL		ND	UG/L	1.0
n-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
sec-Butylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
tert-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Carbon disulfide	0.17	1.0	PQL		ND	UG/L	1.0
Carbon tetrachloride	0.27	1.0	PQL		ND	UG/L	1.0
Chlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Dibromochloromethane	0.10	1.0	PQL		1.4	UG/L	1.0
Chloroethane	0.17	2.0	PQL		ND	UG/L	1.0
Chloroform	0.10	1.0	PQL		ND	UG/L	1.0
Chloromethane	0.49	2.0	PQL		ND	UG/L	1.0
2-Chlorotoluene	0.11	1.0	PQL		ND	UG/L	1.0
4-Chlorotoluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2-Dibromo-3-chloropropane	0.40	10.	PQL		ND	UG/L	1.0
1,2-Dibromoethane	0.10	1.0	PQL		ND	UG/L	1.0
Dibromomethane	0.20	1.0	PQL		ND	UG/L	1.0
1,2-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	0.12	1.0	PQL		ND	UG/L	1.0
Dichlorodifluoromethane	0.20	2.0	PQL		ND	UG/L	1.0
1,1-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,2-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,1-Dichloroethene	0.23	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date:

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Volatile Organic Compounds by GC/MS
Method: SW8260
Prep Meth: SW5030

Field ID: 99GAMNVW201
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1115
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640003SA
Rec'd Date: 03/29/1999
Prep Date: 03/30/1999
Analysis Date: 03/30/1999
QC Batch: A990330F
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
cis-1,2-Dichloroethene	0.22	1.0	PQL		ND	UG/L	1.0
trans-1,2-Dichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
1,2-Dichloropropane	0.12	1.0	PQL		ND	UG/L	1.0
1,3-Dichloropropane	0.13	1.0	PQL		ND	UG/L	1.0
2,2-Dichloropropane	0.18	1.0	PQL		ND	UG/L	1.0
1,1-Dichloropropene	0.17	1.0	PQL		ND	UG/L	1.0
cis-1,3-Dichloropropene	0.10	1.0	PQL		ND	UG/L	1.0
trans-1,3-Dichloropropene	0.090	1.0	PQL		ND	UG/L	1.0
Ethylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Hexachlorobutadiene	0.16	1.0	PQL		ND	UG/L	1.0
2-Hexanone	0.40	5.0	PQL		ND	UG/L	1.0
Isopropylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
4-Isopropyltoluene	0.10	1.0	PQL		ND	UG/L	1.0
Methylene chloride	0.11	1.0	PQL		ND	UG/L	1.0
4-Methyl-2-pentanone	0.83	5.0	PQL		ND	UG/L	1.0
Naphthalene	0.21	1.0	PQL		ND	UG/L	1.0
n-Propylbenzene	0.12	1.0	PQL		ND	UG/L	1.0
Styrene	0.10	1.0	PQL		ND	UG/L	1.0
1,1,1,2-Tetrachloroethane	0.10	1.0	PQL		ND	UG/L	1.0
1,1,2,2-Tetrachloroethane	0.17	1.0	PQL		ND	UG/L	1.0
Tetrachloroethene	0.11	1.0	PQL		ND	UG/L	1.0
Toluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2,3-Trichlorobenzene	0.17	1.0	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	0.19	1.0	PQL		ND	UG/L	1.0
1,1,1-Trichloroethane	0.13	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloroethane	0.16	1.0	PQL		ND	UG/L	1.0
Trichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
Trichlorofluoromethane	0.14	2.0	PQL		ND	UG/L	1.0
1,2,3-Trichloropropane	0.33	1.0	PQL		ND	UG/L	1.0
1,2,4-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1115	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,3,5-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
Vinyl chloride	0.19	2.0	PQL		ND	UG/L	1.0
o-Xylene	0.10	1.0	PQL		ND	UG/L	1.0
2-Chloroethyl vinyl ether	0.17	5.0	PQL		ND	UG/L	1.0
1-Chlorohexane	0.11	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.11	1.0	PQL		ND	UG/L	1.0
Vinyl acetate	0.41	2.0	PQL		ND	UG/L	1.0
Xylenes	0.18	1.0	PQL		ND	UG/L	1.0
m,p-Xylene (Sum of Isomers)	0.13	1.0	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		87-117	SLSA		108%		1.0
Toluene-d8		88-118	SLSA		95%		1.0
Dibromofluoromethane		70-130	SLSA		105%		1.0
1,2-Dichloroethane-d4		79-112	SLSA		102%		1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1000	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acetone	1.2	10.	PQL		ND	UG/L	1.0
Benzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromochloromethane	0.17	1.0	PQL		ND	UG/L	1.0
Bromodichloromethane	0.15	1.0	PQL		27.	UG/L	1.0
Bromoform	0.11	1.0	PQL		11.	UG/L	1.0
2-Butanone	1.7	5.0	PQL		ND	UG/L	1.0
Bromomethane	0.74	2.0	PQL		ND	UG/L	1.0
n-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
sec-Butylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
tert-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Carbon disulfide	0.17	1.0	PQL		ND	UG/L	1.0
Carbon tetrachloride	0.27	1.0	PQL		ND	UG/L	1.0
Chlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Dibromochloromethane	0.10	1.0	PQL		28.	UG/L	1.0
Chloroethane	0.17	2.0	PQL		ND	UG/L	1.0
Chloroform	0.10	1.0	PQL		14.	UG/L	1.0
Chloromethane	0.49	2.0	PQL		ND	UG/L	1.0
2-Chlorotoluene	0.11	1.0	PQL		ND	UG/L	1.0
4-Chlorotoluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2-Dibromo-3-chloropropane	0.40	10.	PQL		ND	UG/L	1.0
1,2-Dibromoethane	0.10	1.0	PQL		ND	UG/L	1.0
Dibromomethane	0.20	1.0	PQL		ND	UG/L	1.0
1,2-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	0.12	1.0	PQL		ND	UG/L	1.0
Dichlorodifluoromethane	0.20	2.0	PQL		ND	UG/L	1.0
1,1-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,2-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,1-Dichloroethene	0.23	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Volatile Organic Compounds by GC/MS
Method: SW8260
Prep Meth: SW5030

Field ID: 99GAMTAP001
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1000
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640001SA
Rec'd Date: 03/29/1999
Prep Date: 03/30/1999
Analysis Date: 03/30/1999
QC Batch: A990330F
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
cis-1,2-Dichloroethene	0.22	1.0	PQL		ND	UG/L	1.0
trans-1,2-Dichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
1,2-Dichloropropane	0.12	1.0	PQL		ND	UG/L	1.0
1,3-Dichloropropane	0.13	1.0	PQL		ND	UG/L	1.0
2,2-Dichloropropane	0.18	1.0	PQL		ND	UG/L	1.0
1,1-Dichloropropene	0.17	1.0	PQL		ND	UG/L	1.0
cis-1,3-Dichloropropene	0.10	1.0	PQL		ND	UG/L	1.0
trans-1,3-Dichloropropene	0.090	1.0	PQL		ND	UG/L	1.0
Ethylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Hexachlorobutadiene	0.16	1.0	PQL		ND	UG/L	1.0
2-Hexanone	0.40	5.0	PQL		ND	UG/L	1.0
Isopropylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
4-Isopropyltoluene	0.10	1.0	PQL		ND	UG/L	1.0
Methylene chloride	0.11	1.0	PQL		ND	UG/L	1.0
4-Methyl-2-pentanone	0.83	5.0	PQL		ND	UG/L	1.0
Naphthalene	0.21	1.0	PQL		ND	UG/L	1.0
n-Propylbenzene	0.12	1.0	PQL		ND	UG/L	1.0
Styrene	0.10	1.0	PQL		ND	UG/L	1.0
1,1,1,2-Tetrachloroethane	0.10	1.0	PQL		ND	UG/L	1.0
1,1,2,2-Tetrachloroethane	0.17	1.0	PQL		ND	UG/L	1.0
Tetrachloroethene	0.11	1.0	PQL		ND	UG/L	1.0
Toluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2,3-Trichlorobenzene	0.17	1.0	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	0.19	1.0	PQL		ND	UG/L	1.0
1,1,1-Trichloroethane	0.13	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloroethane	0.16	1.0	PQL		ND	UG/L	1.0
Trichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
Trichlorofluoromethane	0.14	2.0	PQL		ND	UG/L	1.0
1,2,3-Trichloropropane	0.33	1.0	PQL		ND	UG/L	1.0
1,2,4-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1000	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,3,5-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
Vinyl chloride	0.19	2.0	PQL		ND	UG/L	1.0
o-Xylene	0.10	1.0	PQL		ND	UG/L	1.0
2-Chloroethyl vinyl ether	0.17	5.0	PQL		ND	UG/L	1.0
1-Chlorohexane	0.11	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.11	1.0	PQL		ND	UG/L	1.0
Vinyl acetate	0.41	2.0	PQL		ND	UG/L	1.0
Xylenes	0.18	1.0	PQL		ND	UG/L	1.0
m,p-Xylene (Sum of Isomers)	0.13	1.0	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		87-117	SLSA		103%		1.0
Toluene-d8		88-118	SLSA		97%		1.0
Dibromofluoromethane		70-130	SLSA		101%		1.0
1,2-Dichloroethane-d4		79-112	SLSA		97%		1.0

Approved by: _____ Date: _____

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Volatile Organic Compounds by GC/MS
Method: SW8260
Prep Meth: SW5030

Field ID: 99GAMTB032699
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1900
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640004SA
Rec'd Date: 03/29/1999
Prep Date: 03/30/1999
Analysis Date: 03/30/1999
QC Batch: A990330F
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acetone	1.2	10.	PQL		ND	UG/L	1.0
Benzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromochloromethane	0.17	1.0	PQL		ND	UG/L	1.0
Bromodichloromethane	0.15	1.0	PQL		ND	UG/L	1.0
Bromoform	0.11	1.0	PQL		ND	UG/L	1.0
2-Butanone	1.7	5.0	PQL		ND	UG/L	1.0
Bromomethane	0.74	2.0	PQL		ND	UG/L	1.0
n-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
sec-Butylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
tert-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Carbon disulfide	0.17	1.0	PQL		ND	UG/L	1.0
Carbon tetrachloride	0.27	1.0	PQL		ND	UG/L	1.0
Chlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Dibromochloromethane	0.10	1.0	PQL		ND	UG/L	1.0
Chloroethane	0.17	2.0	PQL		ND	UG/L	1.0
Chloroform	0.10	1.0	PQL		ND	UG/L	1.0
Chloromethane	0.49	2.0	PQL		ND	UG/L	1.0
2-Chlorotoluene	0.11	1.0	PQL		ND	UG/L	1.0
4-Chlorotoluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2-Dibromo-3-chloropropane	0.40	10.	PQL		ND	UG/L	1.0
1,2-Dibromoethane	0.10	1.0	PQL		ND	UG/L	1.0
Dibromomethane	0.20	1.0	PQL		ND	UG/L	1.0
1,2-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	0.12	1.0	PQL		ND	UG/L	1.0
Dichlorodifluoromethane	0.20	2.0	PQL		ND	UG/L	1.0
1,1-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,2-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,1-Dichloroethene	0.23	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMTB032699	Lab Samp ID:	0636640004SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1900	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
cis-1,2-Dichloroethene	0.22	1.0	PQL		ND	UG/L	1.0
trans-1,2-Dichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
1,2-Dichloropropane	0.12	1.0	PQL		ND	UG/L	1.0
1,3-Dichloropropane	0.13	1.0	PQL		ND	UG/L	1.0
2,2-Dichloropropane	0.18	1.0	PQL		ND	UG/L	1.0
1,1-Dichloropropene	0.17	1.0	PQL		ND	UG/L	1.0
cis-1,3-Dichloropropene	0.10	1.0	PQL		ND	UG/L	1.0
trans-1,3-Dichloropropene	0.090	1.0	PQL		ND	UG/L	1.0
Ethylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Hexachlorobutadiene	0.16	1.0	PQL		ND	UG/L	1.0
2-Hexanone	0.40	5.0	PQL		ND	UG/L	1.0
Isopropylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
4-Isopropyltoluene	0.10	1.0	PQL		ND	UG/L	1.0
Methylene chloride	0.11	1.0	PQL		ND	UG/L	1.0
4-Methyl-2-pentanone	0.83	5.0	PQL		ND	UG/L	1.0
Naphthalene	0.21	1.0	PQL		ND	UG/L	1.0
n-Propylbenzene	0.12	1.0	PQL		ND	UG/L	1.0
Styrene	0.10	1.0	PQL		ND	UG/L	1.0
1,1,1,2-Tetrachloroethane	0.10	1.0	PQL		ND	UG/L	1.0
1,1,2,2-Tetrachloroethane	0.17	1.0	PQL		ND	UG/L	1.0
Tetrachloroethene	0.11	1.0	PQL		ND	UG/L	1.0
Toluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2,3-Trichlorobenzene	0.17	1.0	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	0.19	1.0	PQL		ND	UG/L	1.0
1,1,1-Trichloroethane	0.13	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloroethane	0.16	1.0	PQL		ND	UG/L	1.0
Trichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
Trichlorofluoromethane	0.14	2.0	PQL		ND	UG/L	1.0
1,2,3-Trichloropropane	0.33	1.0	PQL		ND	UG/L	1.0
1,2,4-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Volatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8260
		Prep Meth:	SW5030

Field ID:	99GAMTB032699	Lab Samp ID:	0636640004SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	03/30/1999
Sample Time:	1900	Analysis Date:	03/30/1999
Matrix:	Ground Water	QC Batch:	A990330F
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,3,5-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
Vinyl chloride	0.19	2.0	PQL		ND	UG/L	1.0
o-Xylene	0.10	1.0	PQL		ND	UG/L	1.0
2-Chloroethyl vinyl ether	0.17	5.0	PQL		ND	UG/L	1.0
1-Chlorohexane	0.11	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.11	1.0	PQL		ND	UG/L	1.0
Vinyl acetate	0.41	2.0	PQL		ND	UG/L	1.0
Xylenes	0.18	1.0	PQL		ND	UG/L	1.0
m,p-Xylene (Sum of Isomers)	0.13	1.0	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		87-117	SLSA		103%		1.0
Toluene-d8		88-118	SLSA		103%		1.0
Dibromofluoromethane		70-130	SLSA		95%		1.0
1,2-Dichloroethane-d4		79-112	SLSA		86%		1.0

Approved by: Date:

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMNVW001	Lab Samp ID:	0636640002SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1100	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acenaphthene	1.0	10.	PQL		ND	UG/L	1.0
Acenaphthylene	1.0	10.	PQL		ND	UG/L	1.0
Aniline	1.0	10.	PQL		ND	UG/L	1.0
Anthracene	1.4	10.	PQL		ND	UG/L	1.0
Benzidine	20.	100.	PQL		ND	UG/L	1.0
Benzoic acid	1.6	50.	PQL		ND	UG/L	1.0
Benzo(a)anthracene	1.1	10.	PQL		ND	UG/L	1.0
Benzo(b)fluoranthene	1.2	10.	PQL		ND	UG/L	1.0
Benzo(k)fluoranthene	1.2	10.	PQL		ND	UG/L	1.0
Benzo(g,h,i)perylene	1.6	10.	PQL		ND	UG/L	1.0
Benzo(a)pyrene	1.0	10.	PQL		ND	UG/L	1.0
Benzyl alcohol	1.3	10.	PQL		ND	UG/L	1.0
bis-(2-chloroethoxy)methane	1.0	10.	PQL		ND	UG/L	1.0
bis-(2-Chloroethyl)ether	1.0	10.	PQL		ND	UG/L	1.0
bis(2-Chloroisopropyl)ether	1.3	10.	PQL		ND	UG/L	1.0
bis-(2-ethylhexyl)phthalate	1.0	10.	PQL		ND	UG/L	1.0
4-Bromophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	1.0
Benzyl butyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
4-Chloroaniline	1.0	10.	PQL		ND	UG/L	1.0
1-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	1.0
2-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	1.0
4-Chloro-3-methylphenol	1.0	10.	PQL		ND	UG/L	1.0
2-Chlorophenol	1.0	10.	PQL		ND	UG/L	1.0
4-Chlorophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	1.0
Chrysene	1.0	10.	PQL		ND	UG/L	1.0
Dibenzo(a,h)anthracene	1.2	10.	PQL		ND	UG/L	1.0
Dibenzofuran	1.3	10.	PQL		ND	UG/L	1.0
Di-n-butyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Semivolatile Organic Compounds by GC/MS
Method: SW8270
Prep Meth: SW3510

Field ID: 99GAMNVW001
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1100
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640002SA
Rec'd Date: 03/29/1999
Prep Date: 04/01/1999
Analysis Date: 04/05/1999
QC Batch: A9904011
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,2-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
3,3'-Dichlorobenzidine	2.9	50.	PQL		ND	UG/L	1.0
2,4-Dichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
Diethyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
2,4-Dimethylphenol	1.0	10.	PQL		ND	UG/L	1.0
Dimethyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
2-Methyl-4,6-dinitrophenol	1.0	50.	PQL		ND	UG/L	1.0
2,4-Dinitrophenol	1.0	50.	PQL		ND	UG/L	1.0
2,4-Dinitrotoluene	1.1	10.	PQL		ND	UG/L	1.0
2,6-Dinitrotoluene	1.9	10.	PQL		ND	UG/L	1.0
Di-n-octyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
Fluoranthene	1.0	10.	PQL		ND	UG/L	1.0
Fluorene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorobutadiene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorocyclopentadiene	1.0	50.	PQL		ND	UG/L	1.0
Hexachloroethane	1.2	10.	PQL		ND	UG/L	1.0
Indeno(1,2,3-cd)pyrene	1.3	10.	PQL		ND	UG/L	1.0
Isophorone	1.0	10.	PQL		ND	UG/L	1.0
2-Methylnaphthalene	1.0	10.	PQL		ND	UG/L	1.0
2-Methylphenol (o-Cresol)	1.1	10.	PQL		ND	UG/L	1.0
4-Methylphenol (p-Cresol)	1.3	10.	PQL		ND	UG/L	1.0
Naphthalene	1.1	10.	PQL		ND	UG/L	1.0
2-Nitroaniline	1.0	50.	PQL		ND	UG/L	1.0
3-Nitroaniline	1.0	50.	PQL		ND	UG/L	1.0
4-Nitroaniline	1.2	50.	PQL		ND	UG/L	1.0
Nitrobenzene	1.2	10.	PQL		ND	UG/L	1.0
2-Nitrophenol	1.0	10.	PQL		ND	UG/L	1.0
4-Nitrophenol	1.1	50.	PQL		ND	UG/L	1.0
n-Nitrosodimethylamine	1.0	10.	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMNVW001	Lab Samp ID:	0636640002SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1100	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
n-Nitrosodiphenylamine	1.0	10.	PQL		ND	UG/L	1.0
n-Nitrosodi-n-propylamine	1.1	10.	PQL		ND	UG/L	1.0
Pentachlorophenol	1.0	50.	PQL		ND	UG/L	1.0
Phenanthrene	1.0	10.	PQL		ND	UG/L	1.0
Phenol	1.0	10.	PQL		ND	UG/L	1.0
Pyrene	1.2	10.	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
2,4,5-Trichlorophenol	1.1	10.	PQL		ND	UG/L	1.0
2,4,6-Trichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
Azobenzene	1.1	10.	PQL		ND	UG/L	1.0
Carbazole	1.0	10.	PQL		ND	UG/L	1.0
Pyridine	1.0	20.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Nitrobenzene-d5		36-111	SLSA		45%		1.0
2,4,6-Tribromophenol		36-138	SLSA		110%		1.0
2-Fluorophenol		18-67	SLSA		36%		1.0
Phenol-d5		15-50	SLSA	AZ	8.2% !		1.0
2-Fluorobiphenyl		29-118	SLSA		53%		1.0
Terphenyl-d14		48-131	SLSA		88%		1.0

AZ: Surr. recovery outside of acceptance limits due to matrix interf.

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1115	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acenaphthene	1.0	10.	PQL		ND	UG/L	0.96
Acenaphthylene	1.0	10.	PQL		ND	UG/L	0.96
Aniline	1.0	10.	PQL		ND	UG/L	0.96
Anthracene	1.4	10.	PQL		ND	UG/L	0.96
Benzidine	20.	100.	PQL		ND	UG/L	0.96
Benzoic acid	1.6	50.	PQL		ND	UG/L	0.96
Benzo(a)anthracene	1.1	10.	PQL		ND	UG/L	0.96
Benzo(b)fluoranthene	1.2	10.	PQL		ND	UG/L	0.96
Benzo(k)fluoranthene	1.2	10.	PQL		ND	UG/L	0.96
Benzo(g,h,i)perylene	1.6	10.	PQL		ND	UG/L	0.96
Benzo(a)pyrene	1.0	10.	PQL		ND	UG/L	0.96
Benzyl alcohol	1.3	10.	PQL		ND	UG/L	0.96
bis-(2-chloroethoxy)methane	1.0	10.	PQL		ND	UG/L	0.96
bis-(2-Chloroethyl)ether	1.0	10.	PQL		ND	UG/L	0.96
bis(2-Chloroisopropyl)ether	1.3	10.	PQL		ND	UG/L	0.96
bis-(2-ethylhexyl)phthalate	1.0	10.	PQL		ND	UG/L	0.96
4-Bromophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	0.96
Benzyl butyl phthalate	1.0	10.	PQL		ND	UG/L	0.96
4-Chloroaniline	1.0	10.	PQL		ND	UG/L	0.96
1-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	0.96
2-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	0.96
4-Chloro-3-methylphenol	1.0	10.	PQL		ND	UG/L	0.96
2-Chlorophenol	1.0	10.	PQL		ND	UG/L	0.96
4-Chlorophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	0.96
Chrysene	1.0	10.	PQL		ND	UG/L	0.96
Dibenzo(a,h)anthracene	1.2	10.	PQL		ND	UG/L	0.96
Dibenzofuran	1.3	10.	PQL		ND	UG/L	0.96
Di-n-butyl phthalate	1.0	10.	PQL		ND	UG/L	0.96
1,3-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	0.96
1,4-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	0.96

Approved by: _____ Date:

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1115	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,2-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	0.96
3,3'-Dichlorobenzidine	2.9	50.	PQL		ND	UG/L	0.96
2,4-Dichlorophenol	1.0	10.	PQL		ND	UG/L	0.96
Diethyl phthalate	1.0	10.	PQL		ND	UG/L	0.96
2,4-Dimethylphenol	1.0	10.	PQL		ND	UG/L	0.96
Dimethyl phthalate	1.0	10.	PQL		ND	UG/L	0.96
2-Methyl-4,6-dinitrophenol	1.0	50.	PQL		ND	UG/L	0.96
2,4-Dinitrophenol	1.0	50.	PQL		ND	UG/L	0.96
2,4-Dinitrotoluene	1.1	10.	PQL		ND	UG/L	0.96
2,6-Dinitrotoluene	1.9	10.	PQL		ND	UG/L	0.96
Di-n-octyl phthalate	1.0	10.	PQL		ND	UG/L	0.96
Fluoranthene	1.0	10.	PQL		ND	UG/L	0.96
Fluorene	1.0	10.	PQL		ND	UG/L	0.96
Hexachlorobenzene	1.0	10.	PQL		ND	UG/L	0.96
Hexachlorobutadiene	1.0	10.	PQL		ND	UG/L	0.96
Hexachlorocyclopentadiene	1.0	50.	PQL		ND	UG/L	0.96
Hexachloroethane	1.2	10.	PQL		ND	UG/L	0.96
Indeno(1,2,3-cd)pyrene	1.3	10.	PQL		ND	UG/L	0.96
Isophorone	1.0	10.	PQL		ND	UG/L	0.96
2-Methylnaphthalene	1.0	10.	PQL		ND	UG/L	0.96
2-Methylphenol (o-Cresol)	1.1	10.	PQL		ND	UG/L	0.96
4-Methylphenol (p-Cresol)	1.3	10.	PQL		ND	UG/L	0.96
Naphthalene	1.1	10.	PQL		ND	UG/L	0.96
2-Nitroaniline	1.0	50.	PQL		ND	UG/L	0.96
3-Nitroaniline	1.0	50.	PQL		ND	UG/L	0.96
4-Nitroaniline	1.2	50.	PQL		ND	UG/L	0.96
Nitrobenzene	1.2	10.	PQL		ND	UG/L	0.96
2-Nitrophenol	1.0	10.	PQL		ND	UG/L	0.96
4-Nitrophenol	1.1	50.	PQL		ND	UG/L	0.96
n-Nitrosodimethylamine	0.96	9.6	PQL		ND	UG/L	0.96

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMNVW201	Lab Samp ID:	0636640003SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1115	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
n-Nitrosodiphenylamine	1.0	10.	PQL		ND	UG/L	0.96
n-Nitrosodi-n-propylamine	1.1	10.	PQL		ND	UG/L	0.96
Pentachlorophenol	1.0	50.	PQL		ND	UG/L	0.96
Phenanthrene	1.0	10.	PQL		ND	UG/L	0.96
Phenol	1.0	10.	PQL		ND	UG/L	0.96
Pyrene	1.2	10.	PQL		ND	UG/L	0.96
1,2,4-Trichlorobenzene	1.0	10.	PQL		ND	UG/L	0.96
2,4,5-Trichlorophenol	1.1	10.	PQL		ND	UG/L	0.96
2,4,6-Trichlorophenol	1.0	10.	PQL		ND	UG/L	0.96
Azobenzene	1.1	10.	PQL		ND	UG/L	0.96
Carbazole	1.0	10.	PQL		ND	UG/L	0.96
Pyridine	1.0	20.	PQL		ND	UG/L	0.96
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Nitrobenzene-d5		36-111	SLSA		58%		0.96
2,4,6-Tribromophenol		36-138	SLSA		121%		0.96
2-Fluorophenol		18-67	SLSA		43%		0.96
Phenol-d5		15-50	SLSA	AZ	13% !		0.96
2-Fluorobiphenyl		29-118	SLSA		64%		0.96
Terphenyl-d14		48-131	SLSA		88%		0.96

AZ: Surr. recovery outside of acceptance limits due to matrix interf.

Approved by: _____ Date: _____

Project Name: Gambell Site 5 RI
Project No: 98-093

Analysis: Semivolatile Organic Compounds by GC/MS
Method: SW8270
Prep Meth: SW3510

Field ID: 99GAMTAP001
Descr/Location: 99G
Sample Date: 03/26/1999
Sample Time: 1000
Matrix: Ground Water
Basis: Not Applicable

Lab Samp ID: 0636640001SA
Rec'd Date: 03/29/1999
Prep Date: 04/01/1999
Analysis Date: 04/05/1999
QC Batch: A9904011
Notes:

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acenaphthene	1.0	10.	PQL		ND	UG/L	1.0
Acenaphthylene	1.0	10.	PQL		ND	UG/L	1.0
Aniline	1.0	10.	PQL		ND	UG/L	1.0
Anthracene	1.4	10.	PQL		ND	UG/L	1.0
Benzidine	20.	100.	PQL		ND	UG/L	1.0
Benzoic acid	1.6	51.	PQL		ND	UG/L	1.0
Benzo(a)anthracene	1.1	10.	PQL		ND	UG/L	1.0
Benzo(b)fluoranthene	1.3	10.	PQL		ND	UG/L	1.0
Benzo(k)fluoranthene	1.2	10.	PQL		ND	UG/L	1.0
Benzo(g,h,i)perylene	1.6	10.	PQL		ND	UG/L	1.0
Benzo(a)pyrene	1.0	10.	PQL		ND	UG/L	1.0
Benzyl alcohol	1.3	10.	PQL		ND	UG/L	1.0
bis-(2-chloroethoxy)methane	1.0	10.	PQL		ND	UG/L	1.0
bis-(2-Chloroethyl)ether	1.1	10.	PQL		ND	UG/L	1.0
bis(2-Chloroisopropyl)ether	1.4	10.	PQL		ND	UG/L	1.0
bis-(2-ethylhexyl)phthalate	1.0	10.	PQL		ND	UG/L	1.0
4-Bromophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	1.0
Benzyl butyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
4-Chloroaniline	1.0	10.	PQL		ND	UG/L	1.0
1-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	1.0
2-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	1.0
4-Chloro-3-methylphenol	1.1	10.	PQL		ND	UG/L	1.0
2-Chlorophenol	1.0	10.	PQL		ND	UG/L	1.0
4-Chlorophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	1.0
Chrysene	1.1	10.	PQL		ND	UG/L	1.0
Dibenzo(a,h)anthracene	1.2	10.	PQL		ND	UG/L	1.0
Dibenzofuran	1.3	10.	PQL		ND	UG/L	1.0
Di-n-butyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	1.1	10.	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1000	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,2-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
3,3'-Dichlorobenzidine	3.0	51.	PQL		ND	UG/L	1.0
2,4-Dichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
Diethyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
2,4-Dimethylphenol	1.0	10.	PQL		ND	UG/L	1.0
Dimethyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
2-Methyl-4,6-dinitrophenol	1.0	51.	PQL		ND	UG/L	1.0
2,4-Dinitrophenol	1.0	51.	PQL		ND	UG/L	1.0
2,4-Dinitrotoluene	1.1	10.	PQL		ND	UG/L	1.0
2,6-Dinitrotoluene	1.9	10.	PQL		ND	UG/L	1.0
Di-n-octyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
Fluoranthene	1.0	10.	PQL		ND	UG/L	1.0
Fluorene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorobutadiene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorocyclopentadiene	1.0	51.	PQL		ND	UG/L	1.0
Hexachloroethane	1.3	10.	PQL		ND	UG/L	1.0
Indeno(1,2,3-cd)pyrene	1.3	10.	PQL		ND	UG/L	1.0
Isophorone	1.0	10.	PQL		ND	UG/L	1.0
2-Methylnaphthalene	1.0	10.	PQL		ND	UG/L	1.0
2-Methylphenol (o-Cresol)	1.2	10.	PQL		ND	UG/L	1.0
4-Methylphenol (p-Cresol)	1.4	10.	PQL		ND	UG/L	1.0
Naphthalene	1.2	10.	PQL		ND	UG/L	1.0
2-Nitroaniline	1.0	51.	PQL		ND	UG/L	1.0
3-Nitroaniline	1.0	51.	PQL		ND	UG/L	1.0
4-Nitroaniline	1.3	51.	PQL		ND	UG/L	1.0
Nitrobenzene	1.2	10.	PQL		ND	UG/L	1.0
2-Nitrophenol	1.0	10.	PQL		ND	UG/L	1.0
4-Nitrophenol	1.1	51.	PQL		ND	UG/L	1.0
n-Nitrosodimethylamine	1.0	10.	PQL		ND	UG/L	1.0

Approved by: _____ Date: _____

Project Name:	Gambell Site 5 RI	Analysis:	Semivolatile Organic Compounds by GC/MS
Project No:	98-093	Method:	SW8270
		Prep Meth:	SW3510

Field ID:	99GAMTAP001	Lab Samp ID:	0636640001SA
Descr/Location:	99G	Rec'd Date:	03/29/1999
Sample Date:	03/26/1999	Prep Date:	04/01/1999
Sample Time:	1000	Analysis Date:	04/05/1999
Matrix:	Ground Water	QC Batch:	A9904011
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
n-Nitrosodiphenylamine	1.0	10.	PQL		ND	UG/L	1.0
n-Nitrosodi-n-propylamine	1.1	10.	PQL		ND	UG/L	1.0
Pentachlorophenol	1.0	51.	PQL		ND	UG/L	1.0
Phenanthrene	1.0	10.	PQL		ND	UG/L	1.0
Phenol	1.0	10.	PQL		ND	UG/L	1.0
Pyrene	1.2	10.	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
2,4,5-Trichlorophenol	1.2	10.	PQL		ND	UG/L	1.0
2,4,6-Trichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
Azobenzene	1.1	10.	PQL		ND	UG/L	1.0
Carbazole	1.0	10.	PQL		ND	UG/L	1.0
Pyridine	1.0	21.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Nitrobenzene-d5		36-111	SLSA		50%		1.0
2,4,6-Tribromophenol		36-138	SLSA		69%		1.0
2-Fluorophenol		18-67	SLSA		26%		1.0
Phenol-d5		15-50	SLSA		20%		1.0
2-Fluorobiphenyl		29-118	SLSA		55%		1.0
Terphenyl-d14		48-131	SLSA		80%		1.0

Approved by: _____ Date: _____

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A9903301	Analysis:	Diesel Range Organics, Alaska Dept. of
Matrix:	Water Quality Control Matrix	Method:	AK102
Lab Samp ID:	LB990330B	Prep Meth:	SW3510
Analysis Date:	03/31/1999	Prep Date:	03/30/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Diesel Range Organics	14.53	100.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
o-Terphenyl		60-120	SLSA		82%		1.0

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A9903301	Analysis:	State of Alaska Residual Range
Matrix:	Water Quality Control Matrix	Method:	AK103
Lab Samp ID:	LB990330B	Prep Meth:	SW3510
Analysis Date:	03/30/1999	Prep Date:	03/30/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Residual Range Organics	29.37	250.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Tricontane		60-120	SLSA		77%		1.0

QA/C Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9903301
Matrix: Ground Water
Lab Samp ID: 0636640002MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW001
Lab Ref ID: 0636640002SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Diesel Range Organics	AK102	500.	500.	ND	524.	479.	UG/L	105	95.8	9.2	150-50	MSA	20MSP
Residual Range Organics	AK103	500.	500.	ND	512.	445.	UG/L	102	89.0	14	150-50	MSA	20MSP
o-Terphenyl	AK102	100.	100.	82.	82.	82.	PERCENT	82.0	82.0	0.00	150-50	SLSA	NA
Tricontane	AK103	100.	100.	78.	86.	85.	PERCENT	86.0	85.0	1.2	150-50	SLSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9903301
Matrix: Water Quality Control Matrix
Lab Samp ID: BS9903301

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
Diesel Range Organics	AK102	500.	500.	482.	476.	UG/L	96.4	95.2	1.3	120-60 LSA	20LSP
Residual Range Organics	AK103	500.	500.	442.	438.	UG/L	88.4	87.6	0.91	120-60 LSA	20LSP
o-Terphenyl	AK102	100.	100.	80.	80.	PERCENT	80.0	80.0	0.00	120-60 SLSA	NA
Tricontane	AK103	100.	100.	84.	85.	PERCENT	84.0	85.0	1.2	120-60 SLSA	NA

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A990330F	Analysis:	Volatile Organic Compounds by GC/MS
Matrix:	Water Quality Control Matrix	Method:	SW8260
Lab Samp ID:	LB990330F	Prep Meth:	SW5030
Analysis Date:	03/30/1999	Prep Date:	03/30/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acetone	1.24	10.	PQL		ND	UG/L	1.0
Benzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Bromochloromethane	0.17	1.0	PQL		ND	UG/L	1.0
Bromodichloromethane	0.15	1.0	PQL		ND	UG/L	1.0
Bromoform	0.11	1.0	PQL		ND	UG/L	1.0
Bromomethane	0.74	2.0	PQL		ND	UG/L	1.0
2-Butanone	1.67	5.0	PQL		ND	UG/L	1.0
n-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
sec-Butylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
tert-Butylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Carbon disulfide	0.17	1.0	PQL		ND	UG/L	1.0
Carbon tetrachloride	0.27	1.0	PQL		ND	UG/L	1.0
Chlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
Dibromochloromethane	0.10	1.0	PQL		ND	UG/L	1.0
Chloroethane	0.17	2.0	PQL		ND	UG/L	1.0
Chloroform	0.10	1.0	PQL		ND	UG/L	1.0
Chloromethane	0.49	2.0	PQL		ND	UG/L	1.0
2-Chlorotoluene	0.11	1.0	PQL		ND	UG/L	1.0
4-Chlorotoluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2-Dibromo-3-chloropropane	0.40	10.	PQL		ND	UG/L	1.0
1,2-Dibromoethane	0.10	1.0	PQL		ND	UG/L	1.0
Dibromomethane	0.20	1.0	PQL		ND	UG/L	1.0
1,2-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	0.10	1.0	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	0.12	1.0	PQL		ND	UG/L	1.0
Dichlorodifluoromethane	0.20	2.0	PQL		ND	UG/L	1.0
1,1-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,2-Dichloroethane	0.15	1.0	PQL		ND	UG/L	1.0
1,1-Dichloroethene	0.23	1.0	PQL		ND	UG/L	1.0

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A990330F	Analysis:	Volatile Organic Compounds by GC/MS
Matrix:	Water Quality Control Matrix	Method:	SW8260
Lab Samp ID:	LB990330F	Prep Meth:	SW5030
Analysis Date:	03/30/1999	Prep Date:	03/30/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
cis-1,2-Dichloroethene	0.22	1.0	PQL		ND	UG/L	1.0
trans-1,2-Dichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
1,2-Dichloropropane	0.12	1.0	PQL		ND	UG/L	1.0
1,3-Dichloropropane	0.13	1.0	PQL		ND	UG/L	1.0
2,2-Dichloropropane	0.18	1.0	PQL		ND	UG/L	1.0
1,1-Dichloropropene	0.17	1.0	PQL		ND	UG/L	1.0
cis-1,3-Dichloropropene	0.10	1.0	PQL		ND	UG/L	1.0
trans-1,3-Dichloropropene	0.09	1.0	PQL		ND	UG/L	1.0
Ethylbenzene	0.11	1.0	PQL		ND	UG/L	1.0
Hexachlorobutadiene	0.16	1.0	PQL		ND	UG/L	1.0
2-Hexanone	0.40	5.0	PQL		ND	UG/L	1.0
Isopropylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
4-Isopropyltoluene	0.10	1.0	PQL		ND	UG/L	1.0
Methylene chloride	0.11	1.0	PQL		ND	UG/L	1.0
4-Methyl-2-pentanone	0.83	5.0	PQL		ND	UG/L	1.0
Naphthalene	0.21	1.0	PQL		ND	UG/L	1.0
n-Propylbenzene	0.12	1.0	PQL		ND	UG/L	1.0
Styrene	0.10	1.0	PQL		ND	UG/L	1.0
1,1,1,2-Tetrachloroethane	0.10	1.0	PQL		ND	UG/L	1.0
1,1,2,2-Tetrachloroethane	0.17	1.0	PQL		ND	UG/L	1.0
Tetrachloroethene	0.11	1.0	PQL		ND	UG/L	1.0
Toluene	0.10	1.0	PQL		ND	UG/L	1.0
1,2,3-Trichlorobenzene	0.17	1.0	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	0.19	1.0	PQL		ND	UG/L	1.0
1,1,1-Trichloroethane	0.13	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloroethane	0.16	1.0	PQL		ND	UG/L	1.0
Trichloroethene	0.14	1.0	PQL		ND	UG/L	1.0
Trichlorofluoromethane	0.14	2.0	PQL		ND	UG/L	1.0
1,2,3-Trichloropropane	0.33	1.0	PQL		ND	UG/L	1.0
1,2,4-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A990330F	Analysis:	Volatile Organic Compounds by GC/MS
Matrix:	Water Quality Control Matrix	Method:	SW8260
Lab Samp ID:	LB990330F	Prep Meth:	SW5030
Analysis Date:	03/30/1999	Prep Date:	03/30/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,3,5-Trimethylbenzene	0.10	1.0	PQL		ND	UG/L	1.0
Vinyl chloride	0.19	2.0	PQL		ND	UG/L	1.0
o-Xylene	0.10	1.0	PQL		ND	UG/L	1.0
2-Chloroethyl vinyl ether	0.17	5.0	PQL		ND	UG/L	1.0
1-Chlorohexane	0.11	1.0	PQL		ND	UG/L	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.11	1.0	PQL		ND	UG/L	1.0
Vinyl acetate	0.41	2.0	PQL		ND	UG/L	1.0
Xylenes	0.18	1.0	PQL		ND	UG/L	1.0
m,p-Xylene (Sum of Isomers)	0.13	1.0	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		87-117	SLSA		106%		1.0
Toluene-d8		88-118	SLSA		98%		1.0
Dibromofluoromethane		70-130	SLSA		103%		1.0
1,2-Dichloroethane-d4		79-112	SLSA		100%		1.0

QA/C Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Ground Water
Lab Samp ID: 0636640003MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW201
Lab Ref ID: 0636640003SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
1,1,1,2-Tetrachloroethane	SW8260	10.0	10.0	ND	10.2	10.1	UG/L	102	101	0.99	119-81	MSA	4MSP
1,1,1-Trichloroethane	SW8260	10.0	10.0	ND	9.16	9.28	UG/L	91.6	92.8	1.3	111-81	MSA	4MSP
1,1,2,2-Tetrachloroethane	SW8260	10.0	10.0	ND	11.2	11.1	UG/L	112	111	0.90	138-88	MSA	9MSP
1,1,2-Trichloro-1,2,2-trifluoroethane	SW8260	10.0	10.0	ND	8.17	7.74	UG/L	81.7	77.4	5.4	94-64	MSA	16MSP
1,1,2-Trichloroethane	SW8260	10.0	10.0	ND	10.2	10.1	UG/L	102	101	0.99	124-83	MSA	7MSP
1,1-Dichloroethane	SW8260	10.0	10.0	ND	9.02	9.22	UG/L	90.2	92.2	2.2	108-78	MSA	4MSP
1,1-Dichloroethene	SW8260	10.0	10.0	ND	8.67	8.91	UG/L	86.7	89.1	2.7	102-72	MSA	11MSP
1,1-Dichloropropene	SW8260	10.0	10.0	ND	9.64	9.67	UG/L	96.4	96.7	0.31	113-83	MSA	9MSP
1,2,3-Trichlorobenzene	SW8260	10.0	10.0	ND	11.8	12.1	UG/L	118	121	2.5	159-20	MSA	19MSP
1,2,3-Trichloropropane	SW8260	10.0	10.0	ND	10.5	10.5	UG/L	105	105	0.00	128-77	MSA	9MSP
1,2,4-Trichlorobenzene	SW8260	10.0	10.0	ND	11.4	11.7	UG/L	114	117	2.6	145-35	MSA	16MSP
1,2,4-Trimethylbenzene	SW8260	10.0	10.0	ND	9.05	9.48	UG/L	90.5	94.8	4.6	132-56	MSA	36MSP
1,2-Dibromo-3-chloropropane	SW8260	10.0	10.0	ND	10.1	10.1	UG/L	101	101	0.00	146-59	MSA	17MSP
1,2-Dibromoethane	SW8260	10.0	10.0	ND	10.2	10.1	UG/L	102	101	0.99	121-82	MSA	6MSP
1,2-Dichlorobenzene	SW8260	10.0	10.0	ND	9.62	9.89	UG/L	96.2	98.9	2.8	113-83	MSA	5MSP
1,2-Dichloroethane	SW8260	10.0	10.0	ND	10.1	10.1	UG/L	101	101	0.00	128-77	MSA	11MSP
1,2-Dichloropropane	SW8260	10.0	10.0	ND	10.9	10.7	UG/L	109	107	1.9	120-90	MSA	5MSP
1,3,5-Trimethylbenzene	SW8260	10.0	10.0	ND	8.70	8.74	UG/L	87.0	87.4	0.46	128-58	MSA	33MSP
1,3-Dichlorobenzene	SW8260	10.0	10.0	ND	9.45	9.56	UG/L	94.5	95.6	1.2	114-84	MSA	6MSP
1,3-Dichloropropane	SW8260	10.0	10.0	ND	10.2	10.4	UG/L	102	104	1.9	118-87	MSA	7MSP

QA/C Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Ground Water
Lab Samp ID: 0636640003MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW201
Lab Ref ID: 0636640003SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
1,4-Dichlorobenzene	SW8260	10.0	10.0	ND	9.66	9.88	UG/L	96.6	98.8	2.3	115-85	MSA	5MSP
1-Chlorohexane	SW8260	10.0	10.0	ND	9.28	9.36	UG/L	92.8	93.6	0.86	125-86	MSA	9MSP
2,2-Dichloropropane	SW8260	10.0	10.0	ND	9.34	9.22	UG/L	93.4	92.2	1.3	113-83	MSA	6MSP
2-Butanone	SW8260	20.0	20.0	ND	20.9	20.8	UG/L	105	104	0.96	145-53	MSA	44MSP
2-Chloroethyl vinyl ether	SW8260	20.0	20.0	ND	ND	ND	UG/L	NA	NA	NA	130-70	MSA	NA
2-Chlorotoluene	SW8260	10.0	10.0	ND	8.73	8.79	UG/L	87.3	87.9	0.68	122-77	MSA	7MSP
2-Hexanone	SW8260	20.0	20.0	ND	23.2	22.7	UG/L	116	114	1.7	130-70	MSA	20MSP
4-Chlorotoluene	SW8260	10.0	10.0	ND	9.02	9.26	UG/L	90.2	92.6	2.6	117-81	MSA	8MSP
4-Isopropyltoluene	SW8260	10.0	10.0	ND	9.30	9.69	UG/L	93.0	96.9	4.1	124-73	MSA	13MSP
4-Methyl-2-pentanone	SW8260	20.0	20.0	ND	22.7	22.4	UG/L	114	112	1.8	130-70	MSA	20MSP
Acetone	SW8260	20.0	20.0	ND	19.7	19.7	UG/L	98.5	98.5	0.00	130-70	MSA	20MSP
Benzene	SW8260	10.0	10.0	ND	9.50	9.51	UG/L	95.0	95.1	0.11	113-83	MSA	4MSP
Bromobenzene	SW8260	10.0	10.0	ND	9.41	9.57	UG/L	94.1	95.7	1.7	114-84	MSA	4MSP
Bromochloromethane	SW8260	10.0	10.0	ND	10.2	10.4	UG/L	102	104	1.9	115-85	MSA	6MSP
Bromodichloromethane	SW8260	10.	10.	1.7	11.5	11.5	UG/L	98.0	98.0	0.00	114-79	MSA	4MSP
Bromoform	SW8260	10.0	10.0	ND	11.0	11.2	UG/L	110	112	1.8	135-64	MSA	8MSP
Bromomethane	SW8260	10.0	10.0	ND	10.0	9.39	UG/L	100	93.9	6.3!	105-72	MSA	5MSP
Carbon disulfide	SW8260	20.0	20.0	ND	17.0	17.5	UG/L	85.0	87.5	2.9	130-70	MSA	20MSP
Carbon tetrachloride	SW8260	10.0	10.0	ND	9.03	9.23	UG/L	90.3	92.3	2.2	110-80	MSA	5MSP
Chlorobenzene	SW8260	10.0	10.0	ND	9.88	10.0	UG/L	98.8	100	1.2	116-86	MSA	3MSP

QA/C Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Ground Water
Lab Samp ID: 0636640003MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW201
Lab Ref ID: 0636640003SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Chloroethane	SW8260	10.0	10.0	ND	9.07	8.84	UG/L	90.7	88.4	2.6	115-78	MSA	13MSP
Chloroform	SW8260	10.0	10.0	ND	10.9	10.9	UG/L	109	109	0.00	112-82	MSA	6MSP
Chloromethane	SW8260	10.0	10.0	ND	9.45	9.76	UG/L	94.5	97.6	3.2	115-69	MSA	9MSP
Dibromochloromethane	SW8260	10.	10.	1.4	11.6	11.7	UG/L	102	103	0.98	124-75	MSA	6MSP
Dibromomethane	SW8260	10.0	10.0	ND	10.3	10.3	UG/L	103	103	0.00	128-67	MSA	8MSP
Dichlorodifluoromethane	SW8260	10.0	10.0	ND	8.38	8.45	UG/L	83.8	84.5	0.83	113-74	MSA	7MSP
Ethylbenzene	SW8260	10.0	10.0	ND	8.94	9.10	UG/L	89.4	91.0	1.8	111-81	MSA	7MSP
Hexachlorobutadiene	SW8260	10.0	10.0	ND	9.29	9.54	UG/L	92.9	95.4	2.7	138-39	MSA	6MSP
Isopropylbenzene	SW8260	10.0	10.0	ND	9.33	9.51	UG/L	93.3	95.1	1.9	115-85	MSA	7MSP
Methylene chloride	SW8260	10.0	10.0	ND	9.26	9.19	UG/L	92.6	91.9	0.76	110-80	MSA	4MSP
Naphthalene	SW8260	10.0	10.0	ND	12.8	12.9	UG/L	128	129	0.78	159-35	MSA	26MSP
Styrene	SW8260	10.0	10.0	ND	0.775	ND	UG/L	7.75!	NA	NA	136-45	MSA	NA
Tetrachloroethene	SW8260	10.0	10.0	ND	9.27	9.51	UG/L	92.7	95.1	2.6	111-81	MSA	9MSP
Toluene	SW8260	10.0	10.0	ND	9.02	9.14	UG/L	90.2	91.4	1.3	114-84	MSA	6MSP
Trichloroethene	SW8260	10.0	10.0	ND	9.97	10.0	UG/L	99.7	100	0.30	113-83	MSA	3MSP
Trichlorofluoromethane	SW8260	10.0	10.0	ND	8.71	9.59	UG/L	87.1	95.9	9.6	101-71	MSA	19MSP
Vinyl acetate	SW8260	20.0	20.0	ND	0.939	3.63	UG/L	4.70!	18.2!	120!	130-70	MSA	20MSP
Vinyl chloride	SW8260	10.0	10.0	ND	9.97	10.7	UG/L	99.7	107	7.1	123-77	MSA	10MSP
Xylenes	SW8260	30.0	30.0	ND	27.5	28.1	UG/L	91.7	93.7	2.2	114-84	MSA	12MSP
cis-1,2-Dichloroethene	SW8260	10.0	10.0	ND	10.7	10.7	UG/L	107	107	0.00	121-90	MSA	5MSP

QA/ Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Ground Water
Lab Samp ID: 0636640003MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW201
Lab Ref ID: 0636640003SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
cis-1,3-Dichloropropene	SW8260	10.0	10.0	ND	9.94	9.90	UG/L	99.4	99.0	0.40	111-81	MSA	6MSP
m,p-Xylene (Sum of Isomers)	SW8260	20.0	20.0	ND	18.2	18.6	UG/L	91.0	93.0	2.2	113-83	MSA	12MSP
n-Butylbenzene	SW8260	10.0	10.0	ND	9.29	9.93	UG/L	92.9	99.3	6.7	129-68	MSA	10MSP
n-Propylbenzene	SW8260	10.0	10.0	ND	8.58	9.00	UG/L	85.8	90.0	4.8	125-70	MSA	10MSP
o-Xylene	SW8260	10.0	10.0	ND	9.27	9.44	UG/L	92.7	94.4	1.8	114-84	MSA	10MSP
sec-Butylbenzene	SW8260	10.0	10.0	ND	9.09	9.45	UG/L	90.9	94.5	3.9	130-71	MSA	9MSP
tert-Butylbenzene	SW8260	10.0	10.0	ND	8.99	9.30	UG/L	89.9	93.0	3.4	123-74	MSA	8MSP
trans-1,2-Dichloroethene	SW8260	10.0	10.0	ND	8.13	8.31	UG/L	81.3	83.1	2.2	101-71	MSA	4MSP
trans-1,3-Dichloropropene	SW8260	10.0	10.0	ND	10.2	10.1	UG/L	102	101	0.99	117-75	MSA	9MSP
1,2-Dichloroethane-d4	SW8260	100.	100.	102.	107.	106.	PERCENT	107	106	0.94	112-79	SLSA	NA
4-Bromofluorobenzene	SW8260	100.	100.	108.	109.	106.	PERCENT	109	106	2.8	117-87	SLSA	NA
Dibromofluoromethane	SW8260	100.	100.	105.	106.	106.	PERCENT	106	106	0.00	130-70	SLSA	NA
Toluene-d8	SW8260	100.	100.	95.	97.	96.	PERCENT	97.0	96.0	1.0	118-88	SLSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Water Quality Control Matrix
Lab Samp ID: BS990330F

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
1,1,1,2-Tetrachloroethane	SW8260	10.0	NA	9.71	NA	UG/L	97.1	NA	NA	118-86 LSA	NA
1,1,1-Trichloroethane	SW8260	10.0	NA	9.62	NA	UG/L	96.2	NA	NA	112-82 LSA	NA
1,1,2,2-Tetrachloroethane	SW8260	10.0	NA	10.4	NA	UG/L	104	NA	NA	127-81 LSA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	SW8260	10.0	NA	8.42	NA	UG/L	84.2	NA	NA	125-41 LSA	NA
1,1,2-Trichloroethane	SW8260	10.0	NA	9.83	NA	UG/L	98.3	NA	NA	124-86 LSA	NA
1,1-Dichloroethane	SW8260	10.0	NA	9.46	NA	UG/L	94.6	NA	NA	109-79 LSA	NA
1,1-Dichloroethene	SW8260	10.0	NA	9.21	NA	UG/L	92.1	NA	NA	117-65 LSA	NA
1,1-Dichloropropene	SW8260	10.0	NA	10.2	NA	UG/L	102	NA	NA	115-85 LSA	NA
1,2,3-Trichlorobenzene	SW8260	10.0	NA	10.9	NA	UG/L	109	NA	NA	121-82 LSA	NA
1,2,3-Trichloropropane	SW8260	10.0	NA	9.66	NA	UG/L	96.6	NA	NA	126-80 LSA	NA
1,2,4-Trichlorobenzene	SW8260	10.0	NA	11.2	NA	UG/L	112	NA	NA	116-86 LSA	NA
1,2,4-Trimethylbenzene	SW8260	10.0	NA	10.1	NA	UG/L	101	NA	NA	116-86 LSA	NA
1,2-Dibromo-3-chloropropane	SW8260	10.0	NA	9.35	NA	UG/L	93.5	NA	NA	138-67 LSA	NA
1,2-Dibromoethane	SW8260	10.0	NA	9.71	NA	UG/L	97.1	NA	NA	122-84 LSA	NA
1,2-Dichlorobenzene	SW8260	10.0	NA	9.82	NA	UG/L	98.2	NA	NA	114-84 LSA	NA
1,2-Dichloroethane	SW8260	10.0	NA	9.64	NA	UG/L	96.4	NA	NA	130-75 LSA	NA
1,2-Dichloropropane	SW8260	10.0	NA	10.4	NA	UG/L	104	NA	NA	121-91 LSA	NA
1,3,5-Trimethylbenzene	SW8260	10.0	NA	10.2	NA	UG/L	102	NA	NA	115-84 LSA	NA
1,3-Dichlorobenzene	SW8260	10.0	NA	10.1	NA	UG/L	101	NA	NA	115-85 LSA	NA
1,3-Dichloropropane	SW8260	10.0	NA	10.0	NA	UG/L	100	NA	NA	118-88 LSA	NA
1,4-Dichlorobenzene	SW8260	10.0	NA	9.82	NA	UG/L	98.2	NA	NA	115-85 LSA	NA
1-Chlorohexane	SW8260	10.0	NA	10.1	NA	UG/L	101	NA	NA	124-84 LSA	NA
2,2-Dichloropropane	SW8260	10.0	NA	10.3	NA	UG/L	103	NA	NA	121-84 LSA	NA
2-Butanone	SW8260	20.0	NA	19.5	NA	UG/L	97.5	NA	NA	138-69 LSA	NA
2-Chloroethyl vinyl ether	SW8260	20.0	NA	18.1	NA	UG/L	90.5	NA	NA	130-70 LSA	NA
2-Chlorotoluene	SW8260	10.0	NA	10.1	NA	UG/L	101	NA	NA	117-82 LSA	NA
2-Hexanone	SW8260	20.0	NA	21.2	NA	UG/L	106	NA	NA	111-81 LSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Water Quality Control Matrix
Lab Samp ID: BS990330F

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
4-Chlorotoluene	SW8260	10.0	NA	9.90	NA	UG/L	99.0	NA	NA	114-84 LSA	NA
4-Isopropyltoluene	SW8260	10.0	NA	10.6	NA	UG/L	106	NA	NA	119-85 LSA	NA
4-Methyl-2-pentanone	SW8260	20.0	NA	19.9	NA	UG/L	99.5	NA	NA	118-72 LSA	NA
Acetone	SW8260	20.0	NA	15.1	NA	UG/L	75.5	NA	NA	174-1 LSA	NA
Benzene	SW8260	10.0	NA	9.67	NA	UG/L	96.7	NA	NA	112-82 LSA	NA
Bromobenzene	SW8260	10.0	NA	9.75	NA	UG/L	97.5	NA	NA	115-85 LSA	NA
Bromochloromethane	SW8260	10.0	NA	9.80	NA	UG/L	98.0	NA	NA	114-86 LSA	NA
Bromodichloromethane	SW8260	10.0	NA	9.77	NA	UG/L	97.7	NA	NA	115-81 LSA	NA
Bromoform	SW8260	10.0	NA	9.46	NA	UG/L	94.6	NA	NA	133-73 LSA	NA
Bromomethane	SW8260	10.0	NA	11.4	NA	UG/L	114	NA	NA	121-61 LSA	NA
Carbon disulfide	SW8260	20.0	NA	18.1	NA	UG/L	90.5	NA	NA	149-41 LSA	NA
Carbon tetrachloride	SW8260	10.0	NA	9.29	NA	UG/L	92.9	NA	NA	112-82 LSA	NA
Chlorobenzene	SW8260	10.0	NA	9.90	NA	UG/L	99.0	NA	NA	116-86 LSA	NA
Chloroethane	SW8260	10.0	NA	9.24	NA	UG/L	92.4	NA	NA	119-74 LSA	NA
Chloroform	SW8260	10.0	NA	10.0	NA	UG/L	100	NA	NA	113-83 LSA	NA
Chloromethane	SW8260	10.0	NA	9.77	NA	UG/L	97.7	NA	NA	126-60 LSA	NA
Dibromochloromethane	SW8260	10.0	NA	9.94	NA	UG/L	99.4	NA	NA	123-83 LSA	NA
Dibromomethane	SW8260	10.0	NA	9.60	NA	UG/L	96.0	NA	NA	125-72 LSA	NA
Dichlorodifluoromethane	SW8260	10.0	NA	8.79	NA	UG/L	87.9	NA	NA	135-52 LSA	NA
Ethylbenzene	SW8260	10.0	NA	9.43	NA	UG/L	94.3	NA	NA	115-85 LSA	NA
Hexachlorobutadiene	SW8260	10.0	NA	10.2	NA	UG/L	102	NA	NA	118-83 LSA	NA
Isopropylbenzene	SW8260	10.0	NA	10.0	NA	UG/L	100	NA	NA	106-86 LSA	NA
Methylene chloride	SW8260	10.0	NA	9.22	NA	UG/L	92.2	NA	NA	110-80 LSA	NA
Naphthalene	SW8260	10.0	NA	11.8	NA	UG/L	118	NA	NA	134-78 LSA	NA
Styrene	SW8260	10.0	NA	9.71	NA	UG/L	97.1	NA	NA	117-87 LSA	NA
Tetrachloroethene	SW8260	10.0	NA	9.85	NA	UG/L	98.5	NA	NA	113-83 LSA	NA
Toluene	SW8260	10.0	NA	9.52	NA	UG/L	95.2	NA	NA	115-85 LSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990330F
Matrix: Water Quality Control Matrix
Lab Samp ID: BS990330F

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
Trichloroethene	SW8260	10.0	NA	10.0	NA	UG/L	100	NA	NA	114-84 LSA	NA
Trichlorofluoromethane	SW8260	10.0	NA	9.77	NA	UG/L	97.7	NA	NA	131-49 LSA	NA
Vinyl acetate	SW8260	20.0	NA	11.2	NA	UG/L	56.0	NA	NA	190-16 LSA	NA
Vinyl chloride	SW8260	10.0	NA	10.0	NA	UG/L	100	NA	NA	132-70 LSA	NA
Xylenes	SW8260	30.0	NA	28.9	NA	UG/L	96.3	NA	NA	159-42 LSA	NA
cis-1,2-Dichloroethene	SW8260	10.0	NA	10.2	NA	UG/L	102	NA	NA	125-88 LSA	NA
cis-1,3-Dichloropropene	SW8260	10.0	NA	9.45	NA	UG/L	94.5	NA	NA	113-83 LSA	NA
m,p-Xylene (Sum of Isomers)	SW8260	20.0	NA	19.2	NA	UG/L	96.0	NA	NA	150-48 LSA	NA
n-Butylbenzene	SW8260	10.0	NA	10.8	NA	UG/L	108	NA	NA	122-81 LSA	NA
n-Propylbenzene	SW8260	10.0	NA	9.96	NA	UG/L	99.6	NA	NA	116-80 LSA	NA
o-Xylene	SW8260	10.0	NA	9.71	NA	UG/L	97.1	NA	NA	117-87 LSA	NA
sec-Butylbenzene	SW8260	10.0	NA	10.6	NA	UG/L	106	NA	NA	123-83 LSA	NA
tert-Butylbenzene	SW8260	10.0	NA	10.2	NA	UG/L	102	NA	NA	117-84 LSA	NA
trans-1,2-Dichloroethene	SW8260	10.0	NA	8.47	NA	UG/L	84.7	NA	NA	112-66 LSA	NA
trans-1,3-Dichloropropene	SW8260	10.0	NA	9.44	NA	UG/L	94.4	NA	NA	118-80 LSA	NA
1,2-Dichloroethane-d4	SW8260	100.	NA	101.	NA	PERCENT	101	NA	NA	112-79 SLSA	NA
4-Bromofluorobenzene	SW8260	100.	NA	106.	NA	PERCENT	106	NA	NA	117-87 SLSA	NA
Dibromofluoromethane	SW8260	100.	NA	102.	NA	PERCENT	102	NA	NA	130-70 SLSA	NA
Toluene-d8	SW8260	100.	NA	99.	NA	PERCENT	99.0	NA	NA	118-88 SLSA	NA

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A990331N1	Analysis:	Gasoline Range Organics, Alaska Dept. of
Matrix:	Water Quality Control Matrix	Method:	AK101
Lab Samp ID:	LB990331N1	Prep Meth:	SW5030
Analysis Date:	03/31/1999	Prep Date:	03/31/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Gasoline Range Organics	0.040	0.10	PQL		ND	MG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
4-Bromofluorobenzene		60-120	SLSA		83%		1.0
Trifluorotoluene		60-120	SLSA		86%		1.0

QA/ Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990331N1
Matrix: Ground Water
Lab Samp ID: 0636640002MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW001
Lab Ref ID: 0636640002SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Gasoline Range Organics	AK101	1.00	1.00	ND	0.880	0.890	MG/L	88.0	89.0	1.1	150-50	MSA	20MSP
4-Bromofluorobenzene	AK101	100.	100.	84.	91.	92.	PERCENT	91.0	92.0	1.1	150-50	SLSA	NA
Trifluorotoluene	AK101	100.	100.	89.	94.	94.	PERCENT	94.0	94.0	0.00	150-50	SLSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A990331N1
Matrix: Water Quality Control Matrix
Lab Samp ID: BS990331N1

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
Gasoline Range Organics	AK101	1.00	1.00	0.890	0.930	MG/L	89.0	93.0	4.4	120-60 LSA	20LSP
4-Bromofluorobenzene	AK101	100.	100.	90.	90.	PERCENT	90.0	90.0	0.00	120-60 SLSA	NA
Trifluorotoluene	AK101	100.	100.	94.	94.	PERCENT	94.0	94.0	0.00	120-60 SLSA	NA

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A9904011	Analysis:	Semivolatile Organic Compounds by GC/MS
Matrix:	Water Quality Control Matrix	Method:	SW8270
Lab Samp ID:	LB9904051	Prep Meth:	SW3510
Analysis Date:	04/05/1999	Prep Date:	04/01/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
Acenaphthene	1.0	10.	PQL		ND	UG/L	1.0
Acenaphthylene	1.0	10.	PQL		ND	UG/L	1.0
Aniline	1.0	10.	PQL		ND	UG/L	1.0
Anthracene	1.36	10.	PQL		ND	UG/L	1.0
Benzidine	19.60	100.	PQL		ND	UG/L	1.0
Benzoic acid	1.55	50.	PQL		ND	UG/L	1.0
Benzo(a)anthracene	1.06	10.	PQL		ND	UG/L	1.0
Benzo(b)fluoranthene	1.22	10.	PQL		ND	UG/L	1.0
Benzo(g,h,i)perylene	1.55	10.	PQL		ND	UG/L	1.0
Benzo(k)fluoranthene	1.20	10.	PQL		ND	UG/L	1.0
Benzo(a)pyrene	1.0	10.	PQL		ND	UG/L	1.0
Benzyl alcohol	1.30	10.	PQL		ND	UG/L	1.0
bis-(2-chloroethoxy)methane	1.0	10.	PQL		ND	UG/L	1.0
bis-(2-Chloroethyl)ether	1.03	10.	PQL		ND	UG/L	1.0
bis(2-Chloroisopropyl)ether	1.34	10.	PQL		ND	UG/L	1.0
bis-(2-ethylhexyl)phthalate	1.0	10.	PQL		ND	UG/L	1.0
4-Bromophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	1.0
Benzyl butyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
4-Chloroaniline	1.0	10.	PQL		ND	UG/L	1.0
1-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	1.0
2-Chloronaphthalene	1.0	10.	PQL		ND	UG/L	1.0
4-Chloro-3-methylphenol	1.04	10.	PQL		ND	UG/L	1.0
2-Chlorophenol	1.0	10.	PQL		ND	UG/L	1.0
4-Chlorophenyl phenyl ether	1.0	10.	PQL		ND	UG/L	1.0
Chrysene	1.04	10.	PQL		ND	UG/L	1.0
Dibenzo(a,h)anthracene	1.19	10.	PQL		ND	UG/L	1.0
Dibenzofuran	1.31	10.	PQL		ND	UG/L	1.0
Di-n-butyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
1,3-Dichlorobenzene	1.02	10.	PQL		ND	UG/L	1.0
1,4-Dichlorobenzene	1.03	10.	PQL		ND	UG/L	1.0

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A9904011	Analysis:	Semivolatile Organic Compounds by GC/MS
Matrix:	Water Quality Control Matrix	Method:	SW8270
Lab Samp ID:	LB9904051	Prep Meth:	SW3510
Analysis Date:	04/05/1999	Prep Date:	04/01/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
1,2-Dichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
3,3'-Dichlorobenzidine	2.92	50.	PQL		ND	UG/L	1.0
2,4-Dichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
2,6-Dichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
Diethyl phthalate	1.01	10.	PQL		ND	UG/L	1.0
2,4-Dimethylphenol	1.0	10.	PQL		ND	UG/L	1.0
Dimethyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
2-Methyl-4,6-dinitrophenol	1.0	50.	PQL		ND	UG/L	1.0
2,4-Dinitrophenol	1.0	50.	PQL		ND	UG/L	1.0
2,4-Dinitrotoluene	1.10	10.	PQL		ND	UG/L	1.0
2,6-Dinitrotoluene	1.88	10.	PQL		ND	UG/L	1.0
Di-n-octyl phthalate	1.0	10.	PQL		ND	UG/L	1.0
Fluoranthene	1.01	10.	PQL		ND	UG/L	1.0
Fluorene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorobutadiene	1.0	10.	PQL		ND	UG/L	1.0
Hexachlorocyclopentadiene	1.0	50.	PQL		ND	UG/L	1.0
Hexachloroethane	1.23	10.	PQL		ND	UG/L	1.0
Indeno(1,2,3-cd)pyrene	1.27	10.	PQL		ND	UG/L	1.0
Isophorone	1.0	10.	PQL		ND	UG/L	1.0
2-Methylnaphthalene	1.0	10.	PQL		ND	UG/L	1.0
2-Methylphenol (o-Cresol)	1.13	10.	PQL		ND	UG/L	1.0
4-Methylphenol (p-Cresol)	1.32	10.	PQL		ND	UG/L	1.0
Naphthalene	1.13	10.	PQL		ND	UG/L	1.0
2-Nitroaniline	1.0	50.	PQL		ND	UG/L	1.0
3-Nitroaniline	1.0	50.	PQL		ND	UG/L	1.0
4-Nitroaniline	1.25	50.	PQL		ND	UG/L	1.0
Nitrobenzene	1.19	10.	PQL		ND	UG/L	1.0
2-Nitrophenol	1.0	10.	PQL		ND	UG/L	1.0
4-Nitrophenol	1.07	50.	PQL		ND	UG/L	1.0

QA/QC Report
Method Blank Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch:	A9904011	Analysis:	Semivolatile Organic Compounds by GC/MS
Matrix:	Water Quality Control Matrix	Method:	SW8270
Lab Samp ID:	LB9904051	Prep Meth:	SW3510
Analysis Date:	04/05/1999	Prep Date:	04/01/1999
Basis:	Not Applicable	Notes:	

Analyte	Det Limit	Rep Limit		Note	Result	Units	Pvc Dil
n-Nitrosodimethylamine	1.0	10.	PQL		ND	UG/L	1.0
n-Nitrosodiphenylamine	1.0	10.	PQL		ND	UG/L	1.0
n-Nitrosodi-n-propylamine	1.10	10.	PQL		ND	UG/L	1.0
Pentachlorophenol	1.0	50.	PQL		ND	UG/L	1.0
Phenanthrene	1.0	10.	PQL		ND	UG/L	1.0
Phenol	1.0	10.	PQL		ND	UG/L	1.0
Pyrene	1.21	10.	PQL		ND	UG/L	1.0
1,2,4-Trichlorobenzene	1.0	10.	PQL		ND	UG/L	1.0
2,4,5-Trichlorophenol	1.13	10.	PQL		ND	UG/L	1.0
2,4,6-Trichlorophenol	1.0	10.	PQL		ND	UG/L	1.0
Azobenzene	1.07	10.	PQL		ND	UG/L	1.0
Carbazole	1.0	10.	PQL		ND	UG/L	1.0
Pyridine	1.0	20.	PQL		ND	UG/L	1.0
SURROGATE AND INTERNAL STANDARD RECOVERIES:							
Nitrobenzene-d5		36-111	SLSA		41%		1.0
2,4,6-Tribromophenol		36-138	SLSA		70%		1.0
2-Fluorophenol		18-67	SLSA		22%		1.0
Phenol-d5		15-50	SLSA		17%		1.0
2-Fluorobiphenyl		29-118	SLSA		47%		1.0
Terphenyl-d14		48-131	SLSA		87%		1.0

QA/ Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Ground Water
Lab Samp ID: 0636640002MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW001
Lab Ref ID: 0636640002SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
1,2,4-Trichlorobenzene	SW8270	96.2	98.0	ND	58.5	62.4	UG/L	60.8	63.7	4.7	129-57	MSA	20MSP
1,2-Dichlorobenzene	SW8270	96.2	98.0	ND	60.6	61.0	UG/L	63.0	62.2	1.3	112-49	MSA	20MSP
1,3-Dichlorobenzene	SW8270	96.2	98.0	ND	58.2	58.5	UG/L	60.5	59.7	1.3	154-17	MSA	20MSP
1,4-Dichlorobenzene	SW8270	96.2	98.0	ND	57.3	58.8	UG/L	59.6	60.0	0.67	106-37	MSA	20MSP
1-Chloronaphthalene	SW8270	96.2	98.0	ND	60.7	62.2	UG/L	63.1	63.5	0.63	107-53	MSA	20MSP
2,4,5-Trichlorophenol	SW8270	96.2	98.0	ND	76.8	71.3	UG/L	79.8	72.8	9.2	117-54	MSA	20MSP
2,4,6-Trichlorophenol	SW8270	96.2	98.0	ND	70.3	71.6	UG/L	73.1	73.1	0.00	129-52	MSA	20MSP
2,4-Dichlorophenol	SW8270	96.2	98.0	ND	65.8	68.2	UG/L	68.4	69.6	1.7	109-40	MSA	20MSP
2,4-Dimethylphenol	SW8270	96.2	98.0	ND	57.6	57.5	UG/L	59.9	58.7	2.0	109-42	MSA	20MSP
2,4-Dinitrophenol	SW8270	96.2	98.0	ND	68.1	68.2	UG/L	70.8	69.6	1.7	173-1	MSA	20MSP
2,4-Dinitrotoluene	SW8270	96.2	98.0	ND	77.4	77.7	UG/L	80.5	79.3	1.5	127-48	MSA	20MSP
2,6-Dinitrotoluene	SW8270	96.2	98.0	ND	77.4	79.4	UG/L	80.5	81.0	0.62	137-68	MSA	20MSP
2-Chloronaphthalene	SW8270	96.2	98.0	ND	54.6	55.9	UG/L	56.8	57.0	0.35	107-53	MSA	20MSP
2-Chlorophenol	SW8270	96.2	98.0	ND	62.3	60.1	UG/L	64.8	61.3	5.6	120-36	MSA	20MSP
2-Methyl-4,6-dinitrophenol	SW8270	96.2	98.0	ND	66.4	64.3	UG/L	69.0	65.6	5.1	109-51	MSA	20MSP
2-Methylnaphthalene	SW8270	96.2	98.0	ND	66.0	64.8	UG/L	68.6	66.1	3.7	119-35	MSA	20MSP
2-Methylphenol (o-Cresol)	SW8270	96.2	98.0	ND	61.2	56.1	UG/L	63.6	57.2	11	105-32	MSA	20MSP
2-Nitroaniline	SW8270	96.2	98.0	ND	76.3	75.5	UG/L	79.3	77.0	2.9	127-44	MSA	20MSP
2-Nitrophenol	SW8270	96.2	98.0	ND	62.9	65.4	UG/L	65.4	66.7	2.0	167-45	MSA	20MSP
3,3'-Dichlorobenzidine	SW8270	96.2	98.0	ND	16.4	17.0	UG/L	17.0	17.3	1.7	213-8	MSA	20MSP

QA/C Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Ground Water
Lab Samp ID: 0636640002MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW001
Lab Ref ID: 0636640002SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
3-Nitroaniline	SW8270	96.2	98.0	ND	48.9	54.1	UG/L	50.8	55.2	8.3	117-34	MSA	20MSP
4-Bromophenyl phenyl ether	SW8270	96.2	98.0	ND	74.3	74.7	UG/L	77.2	76.2	1.3	114-65	MSA	20MSP
4-Chloro-3-methylphenol	SW8270	96.2	98.0	ND	72.3	70.2	UG/L	75.2	71.6	4.9	126-43	MSA	20MSP
4-Chloroaniline	SW8270	96.2	98.0	ND	57.8	60.3	UG/L	60.1	61.5	2.3	123-19	MSA	20MSP
4-Chlorophenyl phenyl ether	SW8270	96.2	98.0	ND	76.6	75.3	UG/L	79.6	76.8	3.6	145-38	MSA	20MSP
4-Methylphenol (p-Cresol)	SW8270	192.	196.	ND	96.9	88.2	UG/L	50.5	45.0	12	125-42	MSA	20MSP
4-Nitroaniline	SW8270	96.2	98.0	ND	66.6	63.3	UG/L	69.2	64.6	6.9	108-32	MSA	20MSP
4-Nitrophenol	SW8270	96.2	98.0	ND	31.7	32.5	UG/L	33.0	33.2	0.60	107-13	MSA	20MSP
Acenaphthene	SW8270	96.2	98.0	ND	69.0	68.2	UG/L	71.7	69.6	3.0	132-60	MSA	20MSP
Acenaphthylene	SW8270	96.2	98.0	ND	40.3	40.3	UG/L	41.9!	41.1!	1.9	126-54	MSA	20MSP
Aniline	SW8270	96.2	98.0	ND	53.3	53.4	UG/L	55.4	54.5	1.6	92-10	MSA	20MSP
Anthracene	SW8270	96.2	98.0	ND	70.7	70.4	UG/L	73.5	71.8	2.3	118-43	MSA	20MSP
Azobenzene	SW8270	96.2	98.0	ND	77.9	76.9	UG/L	81.0	78.5	3.1	146-44	MSA	20MSP
Benzidine	SW8270	96.2	98.0	ND	ND	ND	UG/L	NA	NA	NA	178-1	MSA	NA
Benzo(a)anthracene	SW8270	96.2	98.0	ND	68.1	68.6	UG/L	70.8	70.0	1.1	133-42	MSA	20MSP
Benzo(a)pyrene	SW8270	96.2	98.0	ND	67.1	66.6	UG/L	69.8	68.0	2.6	148-32	MSA	20MSP
Benzo(b)fluoranthene	SW8270	96.2	98.0	ND	67.4	67.4	UG/L	70.1	68.8	1.9	140-42	MSA	20MSP
Benzo(g,h,i)perylene	SW8270	96.2	98.0	ND	73.3	73.4	UG/L	76.2	74.9	1.7	195-1	MSA	20MSP
Benzo(k)fluoranthene	SW8270	96.2	98.0	ND	68.4	77.1	UG/L	71.1	78.7	10	146-25	MSA	20MSP
Benzoic acid	SW8270	96.2	98.0	ND	21.9	18.9	UG/L	22.8	19.3	17	67-10	MSA	20MSP

QA/ Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Ground Water
Lab Samp ID: 0636640002MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW001
Lab Ref ID: 0636640002SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Benzyl alcohol	SW8270	96.2	98.0	ND	61.2	56.1	UG/L	63.6	57.2	11	91-52	MSA	20MSP
Benzyl butyl phthalate	SW8270	96.2	98.0	ND	69.7	70.1	UG/L	72.5	71.5	1.4	140-1	MSA	20MSP
Carbazole	SW8270	96.2	98.0	ND	28.4	25.4	UG/L	29.5	25.9	13	87-20	MSA	20MSP
Chrysene	SW8270	96.2	98.0	ND	77.5	74.0	UG/L	80.6	75.5	6.5	140-44	MSA	20MSP
Di-n-butyl phthalate	SW8270	96.2	98.0	ND	78.3	79.2	UG/L	81.4	80.8	0.74	111-8	MSA	20MSP
Di-n-octyl phthalate	SW8270	96.2	98.0	ND	70.5	68.6	UG/L	73.3	70.0	4.6	132-19	MSA	20MSP
Dibenzo(a,h)anthracene	SW8270	96.2	98.0	ND	79.0	75.5	UG/L	82.1	77.0	6.4	200-1	MSA	20MSP
Dibenzofuran	SW8270	96.2	98.0	ND	73.0	74.2	UG/L	75.9	75.7	0.26	112-55	MSA	20MSP
Diethyl phthalate	SW8270	96.2	98.0	ND	77.6	78.4	UG/L	80.7	80.0	0.87	100-1	MSA	20MSP
Dimethyl phthalate	SW8270	96.2	98.0	ND	78.9	75.6	UG/L	82.0	77.1	6.2	100-1	MSA	20MSP
Fluoranthene	SW8270	96.2	98.0	ND	77.2	77.2	UG/L	80.2	78.8	1.8	121-43	MSA	20MSP
Fluorene	SW8270	96.2	98.0	ND	77.6	78.7	UG/L	80.7	80.3	0.50	108-72	MSA	20MSP
Hexachlorobenzene	SW8270	96.2	98.0	ND	79.6	75.2	UG/L	82.7	76.7	7.5	119-46	MSA	20MSP
Hexachlorobutadiene	SW8270	96.2	98.0	ND	57.8	63.2	UG/L	60.1	64.5	7.1	102-38	MSA	20MSP
Hexachlorocyclopentadiene	SW8270	96.2	98.0	ND	52.0	54.9	UG/L	54.1	56.0	3.5	103-41	MSA	20MSP
Hexachloroethane	SW8270	96.2	98.0	ND	61.0	63.4	UG/L	63.4	64.7	2.0	100-55	MSA	20MSP
Indeno(1,2,3-cd)pyrene	SW8270	96.2	98.0	ND	75.7	74.9	UG/L	78.7	76.4	3.0	151-1	MSA	20MSP
Isophorone	SW8270	96.2	98.0	ND	80.4	81.6	UG/L	83.6	83.3	0.36	180-47	MSA	20MSP
Naphthalene	SW8270	96.2	98.0	ND	65.5	67.4	UG/L	68.1	68.8	1.0	120-36	MSA	20MSP
Nitrobenzene	SW8270	96.2	98.0	ND	69.1	71.5	UG/L	71.8	73.0	1.7	158-54	MSA	20MSP

QA/C Report
Matrix Spike/Duplicate Matrix Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Ground Water
Lab Samp ID: 0636640002MS
Basis: Not Filtered

Project Name: Gambell Site 5 RI
Project No.: 98-093
Field ID: 99GAMNVW001
Lab Ref ID: 0636640002SA

Analyte	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries MS	% Recoveries DMS	% Recoveries RPD	Acceptance Criteria % Rec		Acceptance Criteria RPD
Pentachlorophenol	SW8270	96.2	98.0	ND	66.2	67.6	UG/L	68.8	69.0	0.29	152-38	MSA	20MSP
Phenanthrene	SW8270	96.2	98.0	ND	74.0	73.9	UG/L	76.9	75.4	2.0	109-65	MSA	20MSP
Phenol	SW8270	96.2	98.0	ND	31.0	29.8	UG/L	32.2	30.4	5.8	100-17	MSA	20MSP
Pyrene	SW8270	96.2	98.0	ND	71.9	72.2	UG/L	74.7	73.7	1.3	100-70	MSA	20MSP
Pyridine	SW8270	96.2	98.0	ND	46.6	48.7	UG/L	48.4	49.7	2.7	101-10	MSA	20MSP
bis(2-Chloroisopropyl)ether	SW8270	96.2	98.0	ND	56.5	54.5	UG/L	58.7!	55.6!	5.4	139-63	MSA	20MSP
bis-(2-Chloroethyl)ether	SW8270	96.2	98.0	ND	71.8	73.9	UG/L	74.6	75.4	1.1	126-43	MSA	20MSP
bis-(2-chloroethoxy)methane	SW8270	96.2	98.0	ND	74.1	75.6	UG/L	77.0	77.1	0.13	165-49	MSA	20MSP
bis-(2-ethylhexyl)phthalate	SW8270	96.2	98.0	ND	70.1	71.8	UG/L	72.9	73.3	0.55	137-29	MSA	20MSP
n-Nitrosodi-n-propylamine	SW8270	96.2	98.0	ND	81.3	76.3	UG/L	84.5	77.9	8.1	198-14	MSA	20MSP
n-Nitrosodimethylamine	SW8270	96.2	98.0	ND	41.8	42.1	UG/L	43.5	43.0	1.2	80-20	MSA	20MSP
n-Nitrosodiphenylamine	SW8270	96.2	98.0	ND	42.2	40.4	UG/L	43.9	41.2	6.3	140-26	MSA	20MSP
2,4,6-Tribromophenol	SW8270	100.	100.	110.	92.	91.	PERCENT	92.0	91.0	1.1	138-36	SLSA	NA
2-Fluorobiphenyl	SW8270	100.	100.	53.	72.	76.	PERCENT	72.0	76.0	5.4	118-29	SLSA	NA
2-Fluorophenol	SW8270	100.	100.	36.	35.	35.	PERCENT	35.0	35.0	0.00	67-18	SLSA	NA
Nitrobenzene-d5	SW8270	100.	100.	45.	69.	73.	PERCENT	69.0	73.0	5.6	111-36	SLSA	NA
Phenol-d5	SW8270	100.	100.	8.2	26.	24.	PERCENT	26.0	24.0	8.0	50-15	SLSA	NA
Terphenyl-d14	SW8270	100.	100.	88.	84.	87.	PERCENT	84.0	87.0	3.5	131-48	SLSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Water Quality Control Matrix
Lab Samp ID: BS9904051

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
1,2,4-Trichlorobenzene	SW8270	100.	NA	63.1	NA	UG/L	63.1	NA	NA	129-57 LSA	NA
1,2-Dichlorobenzene	SW8270	100.	NA	63.9	NA	UG/L	63.9	NA	NA	112-48 LSA	NA
1,3-Dichlorobenzene	SW8270	100.	NA	60.5	NA	UG/L	60.5	NA	NA	153-16 LSA	NA
1,4-Dichlorobenzene	SW8270	100.	NA	61.3	NA	UG/L	61.3	NA	NA	105-37 LSA	NA
1-Chloronaphthalene	SW8270	100.	NA	62.8	NA	UG/L	62.8	NA	NA	107-53 LSA	NA
2,4,5-Trichlorophenol	SW8270	100.	NA	75.0	NA	UG/L	75.0	NA	NA	117-54 LSA	NA
2,4,6-Trichlorophenol	SW8270	100.	NA	71.4	NA	UG/L	71.4	NA	NA	129-52 LSA	NA
2,4-Dichlorophenol	SW8270	100.	NA	70.3	NA	UG/L	70.3	NA	NA	109-40 LSA	NA
2,4-Dimethylphenol	SW8270	100.	NA	68.9	NA	UG/L	68.9	NA	NA	109-41 LSA	NA
2,4-Dinitrophenol	SW8270	100.	NA	68.2	NA	UG/L	68.2	NA	NA	172-1 LSA	NA
2,4-Dinitrotoluene	SW8270	100.	NA	79.6	NA	UG/L	79.6	NA	NA	126-47 LSA	NA
2,6-Dinitrotoluene	SW8270	100.	NA	80.8	NA	UG/L	80.8	NA	NA	136-68 LSA	NA
2-Chloronaphthalene	SW8270	100.	NA	56.5	NA	UG/L	56.5	NA	NA	107-53 LSA	NA
2-Chlorophenol	SW8270	100.	NA	66.5	NA	UG/L	66.5	NA	NA	120-36 LSA	NA
2-Methyl-4,6-dinitrophenol	SW8270	100.	NA	70.1	NA	UG/L	70.1	NA	NA	109-51 LSA	NA
2-Methylnaphthalene	SW8270	100.	NA	69.1	NA	UG/L	69.1	NA	NA	119-35 LSA	NA
2-Methylphenol (o-Cresol)	SW8270	100.	NA	69.2	NA	UG/L	69.2	NA	NA	105-32 LSA	NA
2-Nitroaniline	SW8270	100.	NA	78.3	NA	UG/L	78.3	NA	NA	127-44 LSA	NA
2-Nitrophenol	SW8270	100.	NA	68.0	NA	UG/L	68.0	NA	NA	166-45 LSA	NA
3,3'-Dichlorobenzidine	SW8270	100.	NA	31.1	NA	UG/L	31.1	NA	NA	212-8 LSA	NA
3-Nitroaniline	SW8270	100.	NA	57.6	NA	UG/L	57.6	NA	NA	117-34 LSA	NA
4-Bromophenyl phenyl ether	SW8270	100.	NA	77.1	NA	UG/L	77.1	NA	NA	114-64 LSA	NA
4-Chloro-3-methylphenol	SW8270	100.	NA	77.0	NA	UG/L	77.0	NA	NA	126-43 LSA	NA
4-Chloroaniline	SW8270	100.	NA	67.6	NA	UG/L	67.6	NA	NA	123-19 LSA	NA
4-Chlorophenyl phenyl ether	SW8270	100.	NA	75.8	NA	UG/L	75.8	NA	NA	144-38 LSA	NA
4-Methylphenol (p-Cresol)	SW8270	200.	NA	129.	NA	UG/L	64.5	NA	NA	125-42 LSA	NA
4-Nitroaniline	SW8270	100.	NA	68.2	NA	UG/L	68.2	NA	NA	108-32 LSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Water Quality Control Matrix
Lab Samp ID: BS9904051

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
4-Nitrophenol	SW8270	100.	NA	32.0	NA	UG/L	32.0	NA	NA	106-13 LSA	NA
Acenaphthene	SW8270	100.	NA	74.9	NA	UG/L	74.9	NA	NA	132-60 LSA	NA
Acenaphthylene	SW8270	100.	NA	76.6	NA	UG/L	76.6	NA	NA	126-53 LSA	NA
Aniline	SW8270	100.	NA	63.5	NA	UG/L	63.5	NA	NA	92-10 LSA	NA
Anthracene	SW8270	100.	NA	78.0	NA	UG/L	78.0	NA	NA	118-43 LSA	NA
Azobenzene	SW8270	100.	NA	79.2	NA	UG/L	79.2	NA	NA	146-44 LSA	NA
Benzo(a)anthracene	SW8270	100.	NA	73.1	NA	UG/L	73.1	NA	NA	133-41 LSA	NA
Benzo(a)pyrene	SW8270	100.	NA	72.1	NA	UG/L	72.1	NA	NA	148-31 LSA	NA
Benzo(b)fluoranthene	SW8270	100.	NA	79.5	NA	UG/L	79.5	NA	NA	140-42 LSA	NA
Benzo(g,h,i)perylene	SW8270	100.	NA	72.2	NA	UG/L	72.2	NA	NA	195-1 LSA	NA
Benzo(k)fluoranthene	SW8270	100.	NA	75.4	NA	UG/L	75.4	NA	NA	145-25 LSA	NA
Benzoic acid	SW8270	100.	NA	14.3	NA	UG/L	14.3	NA	NA	67-10 LSA	NA
Benzyl alcohol	SW8270	100.	NA	69.2	NA	UG/L	69.2	NA	NA	91-52 LSA	NA
Benzyl butyl phthalate	SW8270	100.	NA	75.6	NA	UG/L	75.6	NA	NA	139-1 LSA	NA
Carbazole	SW8270	100.	NA	43.0	NA	UG/L	43.0	NA	NA	87-20 LSA	NA
Chrysene	SW8270	100.	NA	73.7	NA	UG/L	73.7	NA	NA	139-44 LSA	NA
Di-n-butyl phthalate	SW8270	100.	NA	81.8	NA	UG/L	81.8	NA	NA	111-8 LSA	NA
Di-n-octyl phthalate	SW8270	100.	NA	89.2	NA	UG/L	89.2	NA	NA	131-18 LSA	NA
Dibenzo(a,h)anthracene	SW8270	100.	NA	76.7	NA	UG/L	76.7	NA	NA	199-1 LSA	NA
Dibenzofuran	SW8270	100.	NA	74.7	NA	UG/L	74.7	NA	NA	112-55 LSA	NA
Diethyl phthalate	SW8270	100.	NA	80.4	NA	UG/L	80.4	NA	NA	100-1 LSA	NA
Dimethyl phthalate	SW8270	100.	NA	78.6	NA	UG/L	78.6	NA	NA	100-1 LSA	NA
Fluoranthene	SW8270	100.	NA	81.6	NA	UG/L	81.6	NA	NA	121-42 LSA	NA
Fluorene	SW8270	100.	NA	79.0	NA	UG/L	79.0	NA	NA	108-71 LSA	NA
Hexachlorobenzene	SW8270	100.	NA	80.8	NA	UG/L	80.8	NA	NA	119-46 LSA	NA
Hexachlorobutadiene	SW8270	100.	NA	64.8	NA	UG/L	64.8	NA	NA	102-37 LSA	NA
Hexachlorocyclopentadiene	SW8270	100.	NA	54.6	NA	UG/L	54.6	NA	NA	103-41 LSA	NA

QA/QC Report
Blank Spike/Duplicate Blank Spike Summary

Quanterra Environmental Services, Anchorage, AK

Lab Report No.: 063664 Date: 04/13/1999

QC Batch: A9904011
Matrix: Water Quality Control Matrix
Lab Samp ID: BS9904051

Analyte	Analysis Method	Spike Level LCS	Spike Level LCD	Spike Result LCS	Spike Result LCD	Units	% Recoveries LCS	% Recoveries LCD	% Recoveries RPD	Acceptance Criteria %Rec	Acceptance Criteria RPD
Hexachloroethane	SW8270	100.	NA	68.5	NA	UG/L	68.5	NA	NA	100-55 LSA	NA
Indeno(1,2,3-cd)pyrene	SW8270	100.	NA	74.1	NA	UG/L	74.1	NA	NA	150-1 LSA	NA
Isophorone	SW8270	100.	NA	87.3	NA	UG/L	87.3	NA	NA	180-46 LSA	NA
Naphthalene	SW8270	100.	NA	69.6	NA	UG/L	69.6	NA	NA	119-35 LSA	NA
Nitrobenzene	SW8270	100.	NA	72.9	NA	UG/L	72.9	NA	NA	157-54 LSA	NA
Pentachlorophenol	SW8270	100.	NA	71.6	NA	UG/L	71.6	NA	NA	151-38 LSA	NA
Phenanthrene	SW8270	100.	NA	78.6	NA	UG/L	78.6	NA	NA	108-65 LSA	NA
Phenol	SW8270	100.	NA	35.7	NA	UG/L	35.7	NA	NA	100-16 LSA	NA
Pyrene	SW8270	100.	NA	79.7	NA	UG/L	79.7	NA	NA	100-69 LSA	NA
Pyridine	SW8270	100.	NA	43.3	NA	UG/L	43.3	NA	NA	101-10 LSA	NA
bis(2-Chloroisopropyl)ether	SW8270	100.	NA	63.8	NA	UG/L	63.8	NA	NA	138-62 LSA	NA
bis-(2-Chloroethyl)ether	SW8270	100.	NA	75.6	NA	UG/L	75.6	NA	NA	126-42 LSA	NA
bis-(2-chloroethoxy)methane	SW8270	100.	NA	79.4	NA	UG/L	79.4	NA	NA	164-49 LSA	NA
bis-(2-ethylhexyl)phthalate	SW8270	100.	NA	79.1	NA	UG/L	79.1	NA	NA	136-28 LSA	NA
n-Nitrosodi-n-propylamine	SW8270	100.	NA	85.0	NA	UG/L	85.0	NA	NA	197-13 LSA	NA
n-Nitrosodimethylamine	SW8270	100.	NA	44.3	NA	UG/L	44.3	NA	NA	80-20 LSA	NA
n-Nitrosodiphenylamine	SW8270	100.	NA	78.2	NA	UG/L	78.2	NA	NA	140-26 LSA	NA
2,4,6-Tribromophenol	SW8270	100.	NA	91.	NA	PERCENT	91.0	NA	NA	138-36 SLSA	NA
2-Fluorobiphenyl	SW8270	100.	NA	70.	NA	PERCENT	70.0	NA	NA	118-29 SLSA	NA
2-Fluorophenol	SW8270	100.	NA	38.	NA	PERCENT	38.0	NA	NA	67-18 SLSA	NA
Nitrobenzene-d5	SW8270	100.	NA	72.	NA	PERCENT	72.0	NA	NA	111-36 SLSA	NA
Phenol-d5	SW8270	100.	NA	30.	NA	PERCENT	30.0	NA	NA	50-15 SLSA	NA
Terphenyl-d14	SW8270	100.	NA	91.	NA	PERCENT	91.0	NA	NA	131-48 SLSA	NA

Code List

Code	Name
!	Out of control limits
1C	First Column Result - The Value Obtained from the First Column
2C	Second Column Result - The Value Obtained from the Second Column
<	Less Than
=	Equal To
>	Greater Than
ACZ	ACZ Laboratories, Steamboat, CO
AEHA	Army Environmental Hygiene Agency (AEHA), APG, MD
AELF	American Environmental Laboratories, Pensacola, FL
AENP	American Environmental Network, Portland, OR
ALTC	Alta Analytical Lab Incorporated, El Dorado Hills, CA
APPL	Agriculture & Priority Pollutants Laboratories, Fresno, CA
ARDL	Applied Research and Development Lab, Inc., (ARDL) Mt. Vernon, IL
ARI	Analytical Resources, Inc., Seattle, WA
ATCA	Analytica, Anchorage, AK
ATCC	Analytica, CO
ATIA	Analytical Technologies, Inc., Anchorage, AK
ATIR	Analytical Technologies, Inc., Renton, WA
ATIS	Analytical Technologies, Inc., San Diego, CA
ATOX	Air Toxics LTD, Folsom, CA
AXYS	Axys Analytical Services, Ltd., Sidney, B.C., Canada
BCLB	BC Laboratories, Bakersfield, CA
BD	Blank Spike Duplicate
BMLA	Boreochem Mobile Lab & Analytical Services
BRS	Brelje & Race, Santa Rosa, CA
BS	Blank Spike
CASA	Columbia Analytical Services, Inc., Anchorage, AK
CASB	Columbia Analytical Services, Inc., Bothell, WA
CASK	Columbia Analytical Services, Inc., Kelso, WA
CASL	Columbia Analytical Services, Inc., Canoga Park, CA
CASR	Columbia Analytical Services, Inc., Redding, CA
CAWL	California Water Labs, Inc., Modesto, CA
CB	Calibration Blank
CC	Continuing Calibration Verification
CCAC	Coast-to-Coast Analytical Services, Inc., Camarillo, CA
CCSJ	Coast-to-Coast Analytical Services, Inc., San Jose, CA
CDM	CDM Federal Programs Corporation
CHEM	Chemic Laboratory, San Diego, CA
CHMC	CH2M Hill Analytical Services, Corvallis, OR
CHMM	CH2M Hill Analytical Services, Montgomery, AL
CHRP	Chromalab, Inc., Pleasanton, CA
CKY	CKY Inc., Torrance, CA
CLPA	Contract Laboratory Program Accuracy Limits for Spiked Samples
CLPCC	CLP Continuing Calibration Acceptance Criteria
CLPIC	CLP Initial Calibration Acceptance Criteria
CLPLR	Contract Laboratory Program Precision for Lab Replicates
CLPP	Contract Laboratory Program Precision Limits for Spiked Samples
CLTP	Clayton Environmental Consultants, Inc., Pleasanton, CA
CRLB	Century Refining (CENREF) Labs, Inc., Brighton, CO
CS	Client Sample
CTB	Curtis & Tompkins, Berkeley, CA
CTE	CT&E Environmental Services, Inc., Anchorage, AK
CTEC	CT&E Environmental Services, Inc., Charleston, WV

Code	Name
DCHM	DataChem Laboratories, Inc., Salt Lake City, UT
DDL	Method Defined Detection Limit
DMP	D & M Laboratories, Petaluma, CA
DOWL	Dowl Engineering Alaska Test Labs, Anchorage, AK
EBA	EBA
ECEN	Ecology & Environment, Inc.
ECI	EcoChem, Inc.
EEIS	Envirodyne Engineers, Inc., St. Louis, MO
EMXT	EMAX Laboratories, Inc., Torrance, CA
EQL	Estimated Quantitation Limit
ETCS	ETC, Santa Rosa, CA
FORA	Forensic Analytical
IC	Initial Calibration Verification
IDL	Instrument Detection Limit
IN	Internal Standard
KD	Known (External Reference Material) Duplicate
KIC	KIC Lab, Prudhoe Bay, AK
LAB1	Laboratory 1
LAB2	Laboratory 2
LAL	Lockheed Analytical Laboratory, Las Vegas, NV
LAS	LAS Laboratories, Inc.
LB	Lab Blank
LCC	Laboratory Continuing Calibration Accuracy
LDC	Laboratory Data Consultants
LIC	Laboratory Initial Calibration Accuracy
LLD	Lowest Level of Detection
LLR	Laboratory Established Precision for Lab Replicates
LR	Lab Replicate
LSA	Laboratory Sample Accuracy for Spiked Samples
LSP	Laboratory Sample Precision for Spiked Samples
LTL	Laucks Testing Lab, Inc.
MASA	MultiChem Analytical Services, Anchorage, AK
MASR	MultiChem Analytical Services, Renton, WA
MDL	Method Detection Limit
MEA	Method Established Accuracy for Spiked Samples
MECC	Method Established Continuing Calibration Acceptance Criteria
MEIC	Method Established Initial Calibration Acceptance Criteria
MELR	Method Established Precision for Laboratory Replicates
MEP	Method Established Precision for Spiked Samples
MLR	Matrix Laboratory Replicate Precision
MRL	Method Reporting Limit (lowest standard adjusted for prep.)
MS	GC/MS Result - Value Confirmed Using GC/MS
MS	Lab Matrix Spike
MSA	Matrix Spike Accuracy for Spiked Samples
MSP	Matrix Spike Precision for Spiked Samples
MSSL	Mountain States Analytical, Salt Lake City, UT
MWLP	Montgomery Watson Laboratories, Pasadena, CA
NA	Not Applicable
NA	Not Available - Result Not Available
NC	Non-Client Sample
NCAB	North Creek Analytical, Bothell, WA
NCAP	North Creek Analytical, Beaverton, OR
ND	Not Detected
NETB	NET Burbank, Burbank, CA
NETC	NET Cambridge, Bedford, MA

Code	Name
NETO	NET Portland, Portland, OR
NETS	NET Pacific, Inc., Santa Rosa, CA
NR	Not Reported - Data Not Reported
NTL	Northern Testing Laboratories, Anchorage, AK
NU	Not Usable - Data Not Usable
OEIR	OnSite Environmental, Inc., Redmond, WA
PAC	Pacific Analytical, Carlsbad, CA
PAIS	Performance Analytical, Inc., Simi Valley, CA
PARA	Paragon Analytics, Inc., CO
PHLE	Philip Environmental
PIC	Pace Analytical Services, Inc., Camarillo, CA
PIHB	Pace Analytical Services, Inc., Huntington Beach, CA
PIL	Pace Analytical Services, Inc., Lenexa, KS
PIM	Pace Analytical Services, Inc., Minneapolis, MN
PIN	Pace Analytical Services, Inc., Novato, CA
PINY	Pace Analytical Services, Inc., New York, NY
PIP	Pace Analytical Services, Inc., Pittsburgh, PA
PITB	Pace Analytical Services, Inc., Tampa Bay, FL
PIWF	Pace Analytical Services, Inc., Wappingers Falls, NY
PQL	Practical Quantitation Limit
PR	Primary Result - The Primary Result for a Parameter
PRL	Parameter Range Limit
QALA	Quality Analytical Laboratores, Inc., Montgomery, AL
QALC	Quality Analytical Laboratories, Inc., Redding, CA
QES	Quanterra Environmental Services, Santa Ana, CA
QESA	Quanterra Environmental Services, Arvada, CO
QESC	Quanterra Environmental Services, North Canton, OH
QESF	Quanterra Environmental Services, Tampa, FL
QESG	Quanterra Environmental Services, Garden Grove,
QESI	Quanterra Environmental Services, City of Industry, CA
QESJ	Quanterra - Research Triangle Park Lab., Raleigh, NC
QESK	Quanterra Environmental Services, Knoxville, TN
QESL	Quanterra Environmental Services, St. Louis, MO
QESN	Quanterra Environmental Services, Anchorage, AK
QESP	Quanterra Environmental Services, Pittsburg, PA
QESR	Quanterra Environmental Services, Richland, WA
QESS	Quanterra Environmental Services, Sacramento, CA
QEST	Quanterra Environmental Services, Austin, TX
QESZ	Quanterra Environmental Services, Anchorage, AK
RFWC	Roy F. Weston, West Chester, PA
RFWS	Roy F. Weston, Stockton, CA
RM	Known (External Reference Material)
RS	Reagent Solvent
SAS	Sound Analytical Services, Inc., Tacoma, WA
SBSA	Both Reagent and Matrix Sample Accuracy for Surrogates
SBSP	Both Reagent and Matrix Sample Precision for Surrogates
SC3S	S-Cubed, A Division of Maxwell Laboratories, Inc., San Diego, CA
SCLA	Contract Laboratory Program Limits for Surrogate Accuracy
SCLP	Contract Laboratory Program Limits for Surrogate Precision
SD	Lab Matrix Spike Duplicate
SEQR	Sequoia Analytical Laboratories, Inc., Redwood City, CA
SLSA	Laboratory Sample Limits for Accuracy for Surrogates
SLSP	Laboratory Sample Limits for Precision for Surrogates
SMEA	Method Established Limits for Accuracy for Surrogates
SMEP	Method Established Limits for Precision for Surrogates

Code	Name
SMSA	Sample Matrix Limits for Accuracy for Surrogates
SMSP	Sample Matrix Limits for Precision for Surrogates
SPEC	Spectra Laboratory, Inc., Tacoma, WA
SR	Semi-Quantitative Result
SRAD	Standard Reference Accuracy Defined by Agency/Manufacturer
SRMA	Standard Reference Material Accuracy Limits Determined by Lab
SRMP	Standard Reference Material Precision Limits Determined by Lab
SRPD	Standard Reference Precision Defined by Agency/Manufacturer
SU	Surrogate
SWAA	Shannon & Wilson, Inc., Anchorage, AK
SWLB	Southwest Laboratory
SWRI	Southwest Resarch Institute, San Antonio, TX
TI	Tentatively Identified Compound
TRID	Triangle Laboratories, Inc., Durham, NC

METHOD

AK101

FORM 2

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

	CLIENT SAMPLE NO.	SMC1 #	SMC2 (BFB) #	SMC3 #	OTHER	TOT OUT
01	C6-C10	90	88			0
02	AK101 LCS	94	91			0
03	AK101 DCS	94	90			0
04	BLANK	86	83			0
05	063664-2	89	84			0
06	063664-2 MS	94	91			0
07	063664-2 MSD	94	92			0
08	063664-1	87	81			0
09	063664-3	88	84			0
10	063664-4	88	83			0
11	BLANK	86	82			0
12						
13						
14						
15						
16						
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24						
25						
26						
27						
28						
29						
30						

		QC LIMITS
SMC1	= aaa-Trifluorotoluene	(60-120)
SMC2 (BFB)	= Bromofluorobenzene	(60-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4

VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

BLANK

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

Lab File ID: 03319905 Lab Sample ID: BLANK

Date Analyzed: 03/31/99 Time Analyzed: 1238

GC Column: ID: 2 (mm) Heated Purge: (Y/N) N

Instrument ID: GCVOA_N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	C6-C10	C6-C10	03319901	1019
02	AK101 LCS	AK101 LCS	03319903	1130
03	AK101 DCS	AK101 DCS	03319904	1204
04	063664-2	063664-2	03319906	1501
05	063664-2 MS	063664-2 MS	03319907	1536
06	063664-2 MSD	063664-2 MSD	03319908	1610
07	063664-1	063664-1	03319909	1644
08	063664-3	063664-3	03319910	1718
09	063664-4	063664-4	03319911	1752
10	BLANK	BLANK	03319912	1827
11				
12				
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28				
29				
30				

COMMENTS:

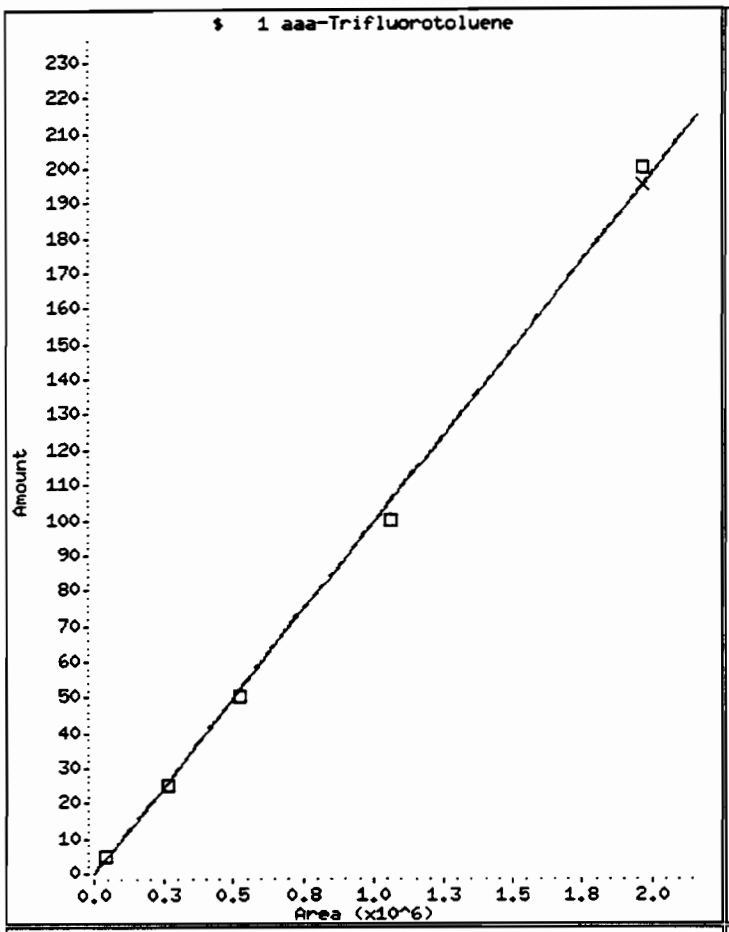
QUANTERRA

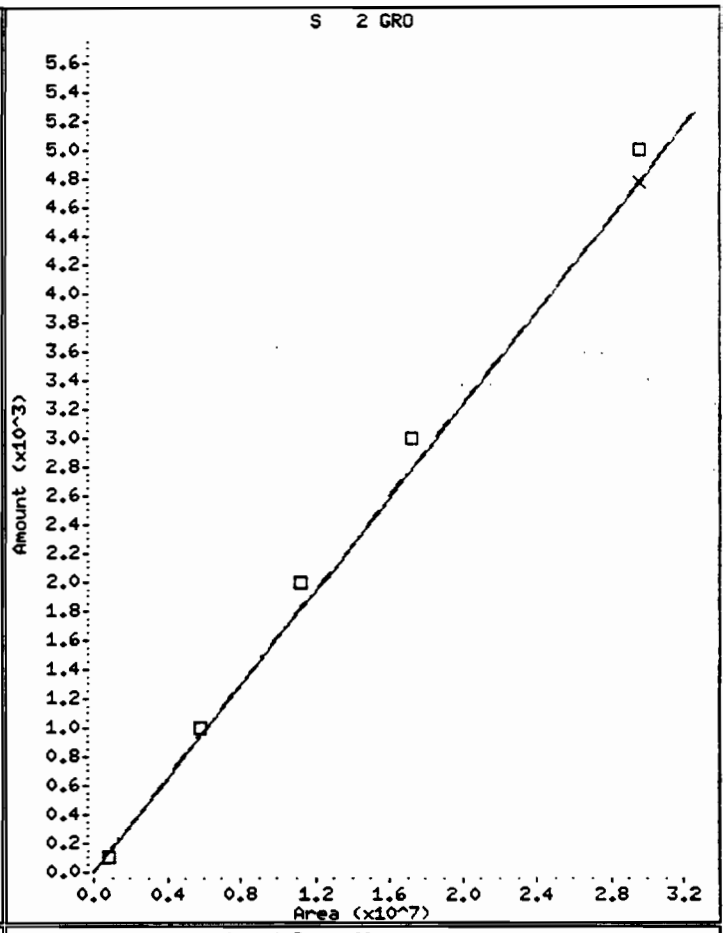
INITIAL CALIBRATION DATA

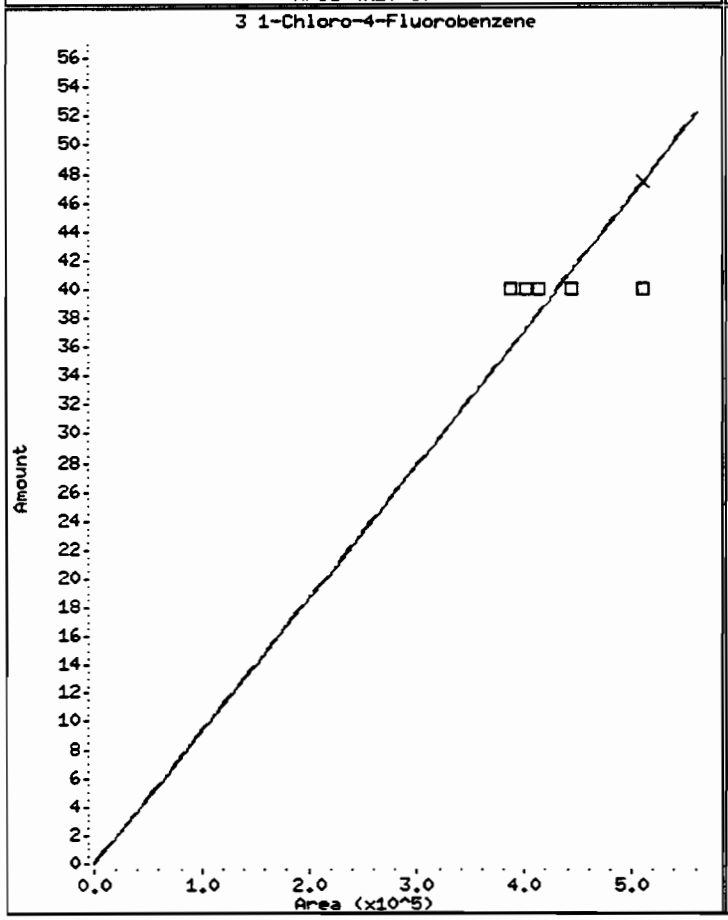
Start Cal Date : 14-MAY-1998 14:32
End Cal Date : 07-AUG-1998 15:01
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : \GCVOA_N.i\080798N-1.b\AK101_FID.m
Cal Date : 09-Aug-1998 12:53 CobbA
Curve Type : Average

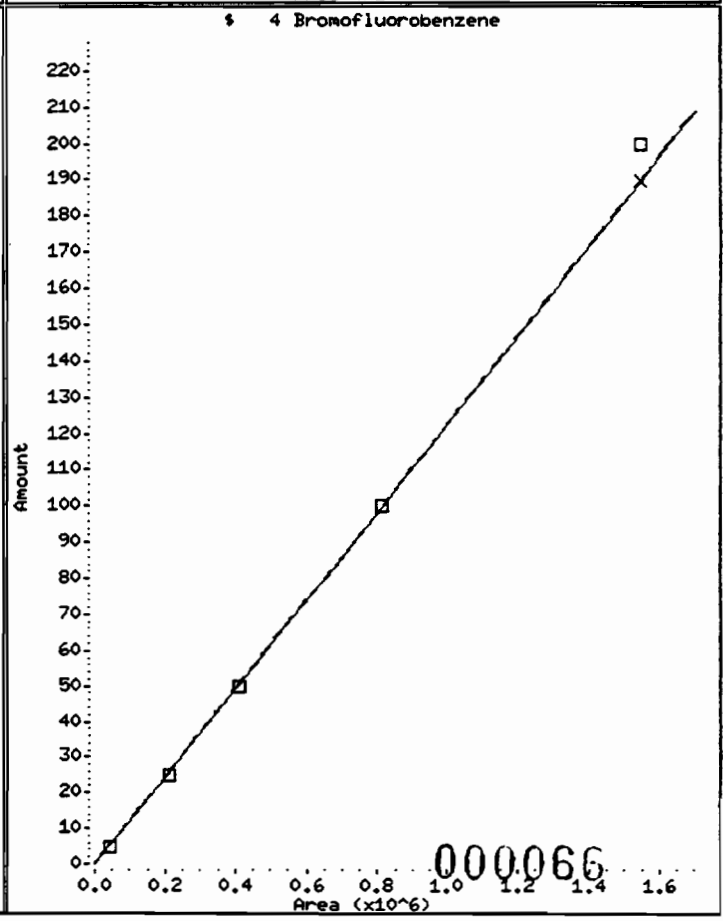
Calibration File Names:
Level 1: \GCVOA_N.i\080798N-1.b\08078003.d
Level 2: \GCVOA_N.i\080798N-1.b\08078004.d
Level 3: \GCVOA_N.i\080798N-1.b\08078005.d
Level 4: \GCVOA_N.i\080798N-1.b\08078006.d
Level 5: \GCVOA_N.i\080798N-1.b\08078007.d

	Compound	5.000 Level 1	25.000 Level 2	50.000 Level 3	100.000 Level 4	200.000 Level 5	RRF	% RSD
S	2 GRO	8002	5763	5622	5754	5928	6214	16.180
	3 1-Chloro-4-Fluorobenzene	9669	10031	10344	11117	12782	10789	11.454
$	1 aaa-Trifluorotoluene	8950	10593	10497	10643	9857	10108	7.127
$	4 Bromofluorobenzene	8215	8468	8252	8152	7743	8166	3.238


$ 1 aaa-Trifluorotoluene
Amount
Area (x10^6)


S 2 GRO
Amount (x10^3)
Area (x10^7)


3 1-Chloro-4-Fluorobenzene
Amount
Area (x10^5)


$ 4 Bromofluorobenzene
Amount
Area (x10^6)

QUANTERRA

Data file : \GCVOA_N.i\080798N-1.b\08078002.d
Lab Smp Id: C6-C10 Client Smp ID: C6-C10
Inj Date : 07-AUG-1998 09:44
Operator : cobba Inst ID: GCVOA_N.i
Smp Info : C6-C10
Misc Info : AK430-43C, AK430-59B, AK430-41B, AK430-18
Comment :
Method : \GCVOA_N.i\080798N-1.b\AK101_FID.m
Meth Date : 10-Aug-1998 10:39 CobbA Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 .QC Sample: ALKANE(C6-C10)
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.747	13.743	0.004	486036	48.0845	48.084
S	2 GRO	9.780-19.830			36598446	5890.03	5890.031
	3 1-Chloro-4-Fluorobenzene	17.130	17.130	0.000	368651	34.1702	34.170
$	4 Bromofluorobenzene	18.723	18.720	0.003	348742	42.7065	42.706

QUANTERRA

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: C6-C10
Level: MED
Data Type: GC DATA
SpikeList File: grolcs.spk
Sublist File: GRO.sub
Method File: \GCVOA_N.i\080798N-1.b\AK101_FID.m
Misc Info: AK430-43C, AK430-59B, AK430-41B, AK430-18

Client SDG: SDGa00189
Fraction: VOA
Client Smp ID: C6-C10
Operator: cobba
SampleType: ALKANE(C6-C10)
Quant Type: ESTD

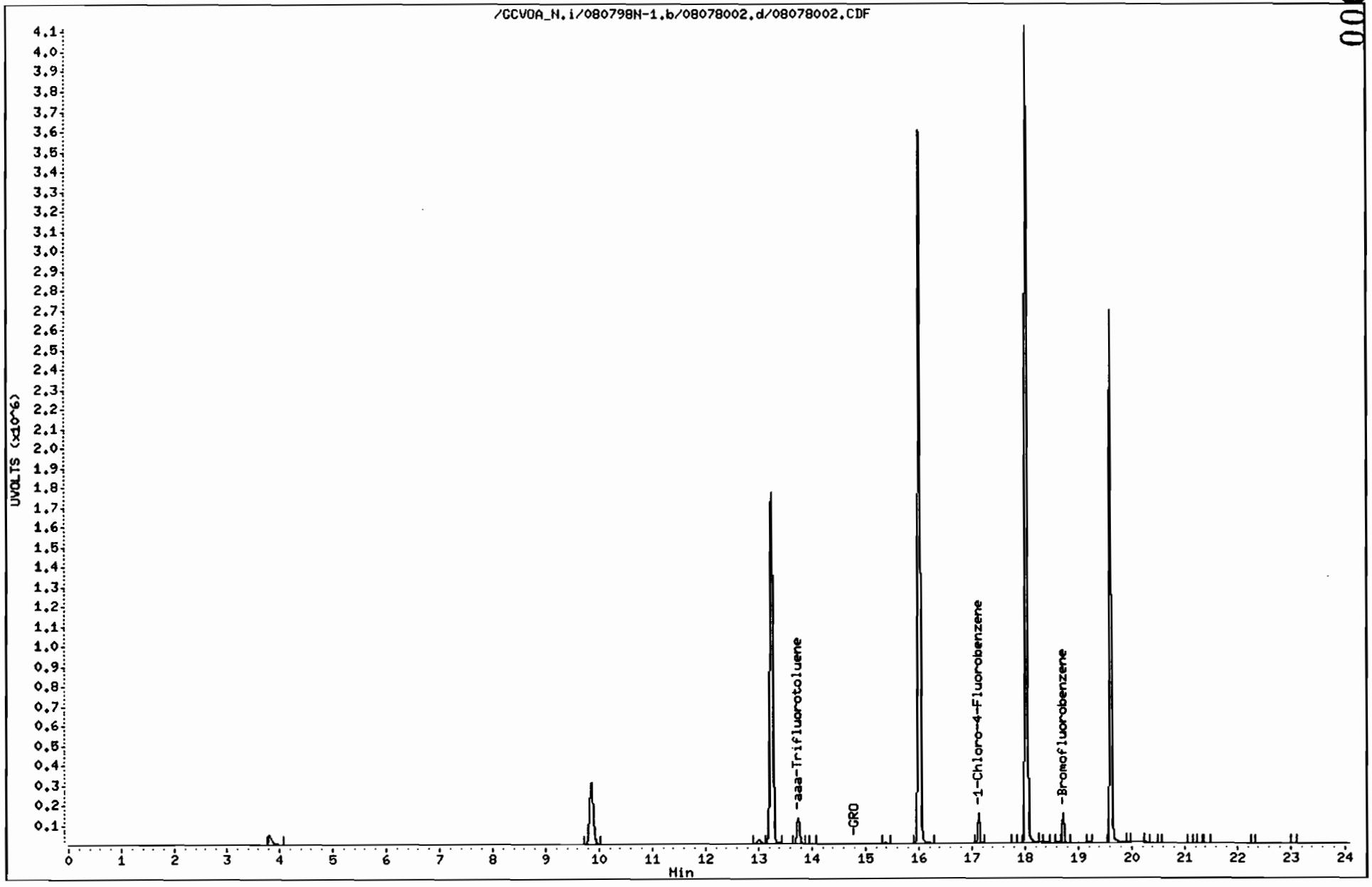
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMIT
$ 1 aaa-Trifluorotolue	50.000	48.084	96.17	60-12
$ 4 Bromofluorobenzene	50.000	42.706	85.41	60-12

Data File: /CCVOA_N.i/080798N-1.b/08078002.d
Date -AUG-1998 09:44
Client: C6-C10
Sample Info: C6-C10

Column phase:

Instrument: CCVOA_N.i

Operator: cobba
Column diameter: 2.00



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319901.d
Lab Smp Id: C6-C10 Client Smp ID: C6-C10
Inj Date : 31-MAR-1999 10:19
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : C6-C10
Misc Info : AK474-39, 24, 7, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 26-Mar-1999 19:54 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 QC Sample: ALKANE(C6-C10)
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
S	1 aaa-Trifluorotoluene	13.737	13.743	-0.006	453377	44.8535	44.853
S	2 GRO	9.780	19.830		46107392	7420.37	7420.369
	3 1-Chloro-4-Fluorobenzene	17.120	17.130	-0.010	376887	34.9336	34.933
S	4 Bromofluorobenzene	18.710	18.720	-0.010	361745	44.2988	44.298

QUANTERRA

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: C6-C10
Level: MED
Data Type: GC DATA
SpikeList File: grolcs.spk
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, 7, AK430-91

Client SDG: 063664
Fraction: VOA
Client Smp ID: C6-C10
Operator: JLB
SampleType: ALKANE(C6-C10)
Quant Type: ESTD

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMI
$ 1 aaa-Trifluorotolue	50.000	44.853	89.71	60-12
$ 4 Bromofluorobenzene	50.000	44.298	88.60	60-12

Data /GCVOA_N.i/033199N-1.b/03319901.d

Date -MAR-1999 10:19

Client ID: C6-C10

Sample Info: C6-C10

Column phase:

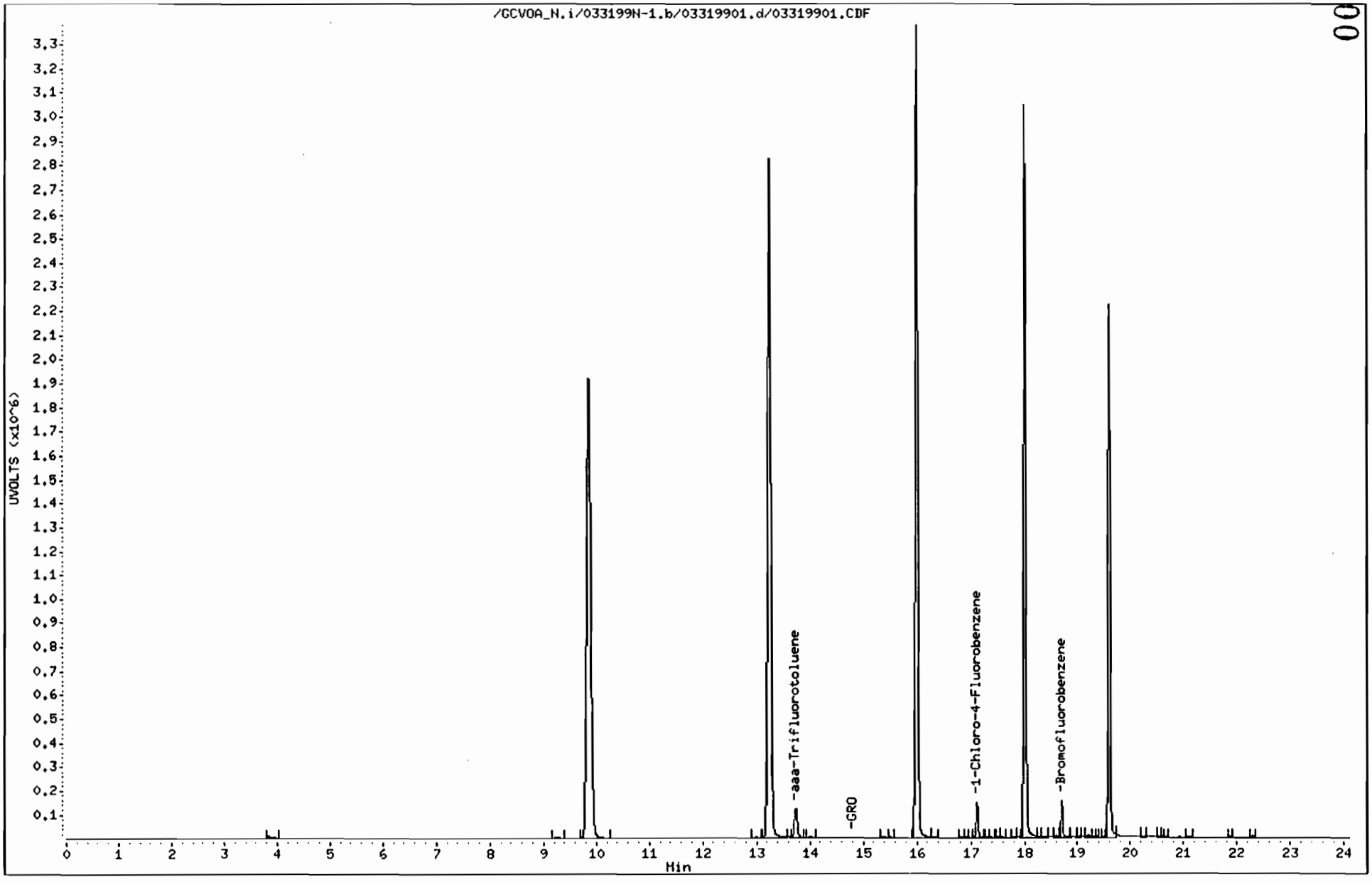
Instrument: GCVOA_N.i

Operator: JLB

Column diameter: 2.00

Page

0000072



QUANTERRA

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCVOA_N.i
Lab File ID: 03319902.d
Analysis Type: WATER
Lab Sample ID: AK101 CCV
Quant Type: ESTD

Injection Date: 31-MAR-1999 10:54
Init. Calibration Date(s): 05/14/98 08/07/98
Init. Calibration Times: 14:32 15:01
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
$	1 aaa-Trifluorotoluene	10107.953	10157.100	0.010	-0.5	20.0
S	2 GRO	6213.625	6920.734	0.010	-11.4	20.0
	3 1-Chloro-4-Fluorobenzene	10788.655	10685.075	0.010	1.0	20.0
$	4 Bromofluorobenzene	8166.022	8060.100	0.010	1.3	20.0

QUANTERRA

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCVOA_N.i
Lab File ID: 03319913.d
Analysis Type: WATER
Lab Sample ID: AK101 CCV
Quant Type: ESTD

Injection Date: 31-MAR-1999 19:02
Init. Calibration Date(s): 05/14/98 08/07/98
Init. Calibration Times: 14:32 15:01
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
S	1 aaa-Trifluorotoluene	10107.953	10420.220	0.010	-3.1	20.0
S	2 GRO	6213.625	6842.569	0.010	-10.1	20.0
	3 1-Chloro-4-Fluorobenzene	10788.655	10892.275	0.010	-1.0	20.0
S	4 Bromofluorobenzene	8166.022	8000.760	0.010	2.0	20.0

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

GC Column: ID: 2.00 (mm) Init. Calib. Date(s): 05/14/98 08/07/98

Instrument ID: GCVOA_N

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 13.74 S2 : 18.72

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	C6-C10	C6-C10	03/31/99	1019	13.74	18.71
02	AK101 CCV	AK101 CCV	03/31/99	1054	13.75	18.71
03	AK101 LCS	AK101 LCS	03/31/99	1130	13.75	18.72
04	AK101 DCS	AK101 DCS	03/31/99	1204	13.74	18.71
05	BLANK	BLANK	03/31/99	1238	13.74	18.71
06	063664-2	063664-2	03/31/99	1501	13.73	18.71
07	063664-2 MS	063664-2 MS	03/31/99	1536	13.74	18.71
08	063664-2 MSD	063664-2 MSD	03/31/99	1610	13.74	18.71
09	063664-1	063664-1	03/31/99	1644	13.74	18.71
10	063664-3	063664-3	03/31/99	1718	13.74	18.71
11	063664-4	063664-4	03/31/99	1752	13.74	18.71
12	BLANK	BLANK	03/31/99	1827	13.74	18.71
13	AK101 CCV	AK101 CCV	03/31/99	1902	13.74	18.71
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QC LIMITS

S1 = aaa-Trifluorotoluene (+/- 0.20 MINUTES)
S2 = Bromofluorobenzene (+/- 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

SAMPLE INFORMATION SUMMARY

BATCH: /GCVOA_N.i/080798N-1.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
08078001.d	07-AUG-1998 08:46	Unknown	1.00	GCVOA_N	AK101_FID.m	080698N-1.b
08078002.d	07-AUG-1998 09:44	ALKANE(C6-C10)	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078003.d	07-AUG-1998 10:19	Cal Level 1	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078004.d	07-AUG-1998 10:53	Cal Level 2	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078005.d	07-AUG-1998 11:28	Cal Level 3	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078006.d	07-AUG-1998 12:03	Cal Level 4	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078007.d	07-AUG-1998 12:38	Cal Level 5	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078008.d	07-AUG-1998 13:15	BLANK	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078009.d	07-AUG-1998 13:49	LCS	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078010.d	07-AUG-1998 15:01	Continuing Cal	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078011.d	07-AUG-1998 16:46	Continuing Cal	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078012.d	07-AUG-1998 17:20	LCSD	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078013.d	07-AUG-1998 17:55	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078014.d	07-AUG-1998 18:30	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
08078001.d	SOLID	VOA		SDGa00189		SDGa00189
08078002.d	LIQUID	VOA	C6-C10	080798	C6-C10	
08078003.d	LIQUID	VOA	GRO STD 1	080798	GRO STD 1	SDGa00189
08078004.d	LIQUID	VOA	GRO STD 2	080798	GRO STD 2	
08078005.d	LIQUID	VOA	GRO STD 3	080798	GRO STD 3	
08078006.d	LIQUID	VOA	GRO STD	080798	GRO STD 4	
08078007.d	LIQUID	VOA	GRO STD 5	080798	GRO STD 5	
08078008.d	LIQUID	VOA	BLANK	080798	BLANK	
08078009.d	LIQUID	VOA	ICV (LCS)	080798	ICV	SDGa00189
08078010.d	LIQUID	VOA	GRO STD 1	080798	GRO STD 1	SDGa00189
08078011.d	LIQUID	VOA	CCV	080798	CCV	SDGa00189
08078012.d	LIQUID	VOA	DCS	080798	DCS	SDGa00189
08078013.d	LIQUID	VOA	062988-03	080798	062988-03	062988
08078014.d	LIQUID	VOA	062988-02	080798	062988-02	062988

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
08078001.d	GRO.sub	grolcs.spk	1289	1290	65	1270
08078002.d	GRO.sub	grolcs.spk	1291	1290	65	1298
08078003.d	GRO.sub	grolcs.spk	1292	1290	65	1298
08078004.d	GRO.sub	grolcs.spk	1293	1290	65	1298
08078005.d	GRO.sub	grolcs.spk	1299	1290	65	1298
08078006.d	GRO.sub	grolcs.spk	1300	1290	65	1298
08078007.d	GRO.sub	grolcs.spk	1301	1290	65	1298
08078008.d	GRO.sub	grolcs.spk	1308	1290	65	1298
08078009.d	GRO.sub	grolcs.spk	1303	1290	65	1298
08078010.d	GRO.sub	grolcs.spk	1302	1290	65	1298
08078011.d	GRO.sub	grolcs.spk	1309	1290	65	1298
08078012.d	GRO.sub	grolcs.spk	1310	1290	65	1298
08078013.d	GRO.sub	grolcs.spk	1311	1290	65	1298
08078014.d	GRO.sub	grolcs.spk	1307	1290	65	1298

SAMPLE INFORMATION SUMMARY

BATCH: /GCVOA_N.i/080798N-1.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
08078015.d	07-AUG-1998 19:06	MS	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078016.d	07-AUG-1998 19:39	MSD	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078017.d	07-AUG-1998 20:14	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078018.d	07-AUG-1998 20:49	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078019.d	07-AUG-1998 21:24	Continuing Cal	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078020.d	07-AUG-1998 21:59	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078021.d	07-AUG-1998 22:34	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078022.d	07-AUG-1998 23:10	MS	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078023.d	07-AUG-1998 23:45	MSD	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078024.d	08-AUG-1998 00:20	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078025.d	08-AUG-1998 00:55	MS	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078026.d	08-AUG-1998 01:30	MSD	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078027.d	08-AUG-1998 02:05	Unknown	1.00	GCVOA_N	AK101_FID.m	080798N-1.b
08078028.d	08-AUG-1998 02:40	Continuing Cal	1.00	GCVOA_N	AK101_FID.m	080798N-1.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
08078015.d	LIQUID	VOA	062988-02 MS	080798	062988-02 MS	062988
08078016.d	LIQUID	VOA	062988-02 MSD	080798	062988-02 MSD	062988
08078017.d	LIQUID	VOA	062988-01	080798	062988-01	062988
08078018.d	LIQUID	VOA	BLANK	080798	BLANK	SDGa00189
08078019.d	LIQUID	VOA	CCV	080798	CCV	
08078020.d	LIQUID	VOA	062996-01	080798	062996-01	062996
08078021.d	LIQUID	VOA	062996-01 DU	080798	062996-01 DU	062996
08078022.d	LIQUID	VOA	062996-01 MS	080798	062996-01 MS	062996
08078023.d	LIQUID	VOA	062996-01 MSD	080798	062996-01 MSD	062996
08078024.d	LIQUID	VOA	063004-01	080798	063004-01	063004
08078025.d	LIQUID	VOA	063004-01 MS	080798	063004-01 MS	063004
08078026.d	LIQUID	VOA	063004-01 MSD	080798	063004-01 MSD	063004
08078027.d	LIQUID	VOA	BLANK	080798	BLANK	
08078028.d	LIQUID	VOA	CCV	080798	CCV	

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
08078015.d	GRO.sub	grolcs.spk	1312	1290	65	1298
08078016.d	GRO.sub	grolcs.spk	1313	1290	65	1298
08078017.d	GRO.sub	grolcs.spk	1314	1290	65	1298
08078018.d	GRO.sub	grolcs.spk	1315	1290	65	1298
08078019.d	GRO.sub	grolcs.spk	1316	1290	65	1298
08078020.d	GRO.sub	grolcs.spk	1305	1290	65	1298
08078021.d	GRO.sub	grolcs.spk	1317	1290	65	1298
08078022.d	GRO.sub	grolcs.spk	1318	1290	65	1298
08078023.d	GRO.sub	grolcs.spk	1319	1290	65	1298
08078024.d	GRO.sub	grolcs.spk	1320	1290	65	1298
08078025.d	GRO.sub	grolcs.spk	1306	1290	65	1298
08078026.d	GRO.sub	grolcs.spk	1321	1290	65	1298
08078027.d	GRO.sub	grolcs.spk	1322	1290	65	1298
08078028.d	GRO.sub	grolcs.spk	1304	1290	65	1298

SAMPLE INFORMATION SUMMARY

BATCH: /GCVOA_N.i/033199N-1.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
03319901.d	31-MAR-1999 10:19	ALKANE(C6-C10)	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319902.d	31-MAR-1999 10:54	Continuing Cal	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319903.d	31-MAR-1999 11:30	LCS	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319904.d	31-MAR-1999 12:04	LCSD	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319905.d	31-MAR-1999 12:38	BLANK	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319906.d	31-MAR-1999 15:01	Unknown	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319907.d	31-MAR-1999 15:36	MS	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319908.d	31-MAR-1999 16:10	MSD	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319909.d	31-MAR-1999 16:44	Unknown	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319910.d	31-MAR-1999 17:18	Unknown	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319911.d	31-MAR-1999 17:52	Unknown	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319912.d	31-MAR-1999 18:27	Unknown	1.00	GCVOA_N	AK101_FID.m	033199N-1.b
03319913.d	31-MAR-1999 19:02	Continuing Cal	1.00	GCVOA_N	AK101_FID.m	033199N-1.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
03319901.d	LIQUID	VOA	C6-C10	033199	C6-C10	063664
03319902.d	LIQUID	VOA	AK101 CCV	033199	AK101 CCV	063664
03319903.d	LIQUID	VOA	AK101 LCS	033199	AK101 LCS	063664
03319904.d	LIQUID	VOA	AK101 DCS	033199	AK101 DCS	063664
03319905.d	LIQUID	VOA	BLANK	033199	BLANK	063664
03319906.d	LIQUID	VOA	063644-2	033199	063664-2	063644
03319907.d	LIQUID	VOA	063644-2 MS	033199	063664-2 MS	063644
03319908.d	LIQUID	VOA	063644-2 MSD	033199	063664-2 MSD	063644
03319909.d	LIQUID	VOA	063644-1	033199	063664-1	063644
03319910.d	LIQUID	VOA	063644-3	033199	063664-3	063644
03319911.d	LIQUID	VOA	063644-4	033199	063664-4	063644
03319912.d	LIQUID	VOA	BLANK	033199	BLANK	063644
03319913.d	LIQUID	VOA	AK101 CCV	033199	AK101 CCV	063664

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
03319901.d	GRO.sub	grolcs.spk	4382	4387	65	4381
03319902.d	GRO.sub	grolcs.spk	4383	4387	65	4381
03319903.d	GRO.sub	grolcs.spk	4384	4387	65	4381
03319904.d	GRO.sub	grolcs.spk	4385	4387	65	4381
03319905.d	GRO.sub	grolcs.spk	4386	4387	65	4381
03319906.d	GRO.sub	grolcs.spk	4388	4387	65	4381
03319907.d	GRO.sub	grolcs.spk	4389	4387	65	4381
03319908.d	GRO.sub	grolcs.spk	4390	4387	65	4381
03319909.d	GRO.sub	grolcs.spk	4391	4387	65	4381
03319910.d	GRO.sub	grolcs.spk	4392	4387	65	4381
03319911.d	GRO.sub	grolcs.spk	4393	4387	65	4381
03319912.d	GRO.sub	grolcs.spk	4394	4387	65	4381
03319913.d	GRO.sub	grolcs.spk	4395	4387	65	4381

000078 HB 4-1-99

FORM 2
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

	CLIENT SAMPLE NO.	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER #	TOT OUT
01	LCS AQUEOUS	101	99	106	102	0
02	BLANK AQUEOU	100	98	106	103	0
03	063664-04	86	103	103	95	0
04	063664-01	97	97	103	101	0
05	063664-02	99	98	107	104	0
06	063664-03	102	95	108	105	0
07	063664-03 MS	107	97	109	106	0
08	063664-03 SD	106	96	106	106	0
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		QC LIMITS
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(79-112)
SMC2 (TOL)	= Toluene-d8	(88-118)
SMC3 (BFB)	= Bromofluorobenzene	(87-117)
OTHER	= Dibromofluoromethane	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

BLANK AQUEOUS

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

Lab File ID: 0330F05 Lab Sample ID: BLANK

Date Analyzed: 03/30/99 Time Analyzed: 1144

GC Column: ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: GCMS_F

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS AQUEOUS	LCS	0330F04	1111
02	063664-04	063664-04	0330F06	1246
03	063664-01	063664-01	0330F07	1319
04	063664-02	063664-02	0330F08	1352
05	063664-03	063664-03	0330F09	1426
06	063664-03 MS	063664-03 MS	0330F10	1459
07	063664-03 SD	063664-03 SD	0330F11	1533
08				
09				
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COMMENTS:

FORM 8
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

Lab File ID (Standard): 0330F03 Date Analyzed: 03/30/99

Instrument ID: GCMS_F Time Analyzed: 1038

GC Column: ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1 AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3 AREA #	RT #
	12 HOUR STD	720553	10.45	295788	15.41	201634	19.57
	UPPER LIMIT	1441106	10.95	591576	15.91	403268	20.07
	LOWER LIMIT	360277	9.95	147894	14.91	100817	19.07
	CLIENT SAMPLE NO.						
01	LCS AQUEOUS	703473	10.44	292492	15.40	202395	19.55
02	BLANK AQUEOU	681559	10.44	286195	15.40	184992	19.55
03	063664-04	627567	10.46	249324	15.42	160006	19.57
04	063664-01	650285	10.43	275341	15.40	186914	19.55
05	063664-02	668745	10.44	287046	15.40	204670	19.56
06	063664-03	683701	10.45	295443	15.41	212086	19.57
07	063664-03 MS	698730	10.45	302041	15.42	222267	19.57
08	063664-03 SD	692093	10.46	300889	15.42	220267	19.57
09							
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19							
20							
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22							

IS1 = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 = 1,4 Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

000082

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAY-1998 18:11
End Cal Date : 09-FEB-1999 19:36
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_F.i\020999.B\FVOAW.M
Cal Date : 10-Feb-1999 09:52 VoigtG

Calibration File Names:
Level 1: \GCMS_F.i\020999.B\0209F04.D
Level 2: \GCMS_F.i\020999.B\0209F05.D
Level 3: \GCMS_F.i\020999.B\0209F06.D
Level 4: \GCMS_F.i\020999.B\0209F07.D
Level 5: \GCMS_F.i\020999.B\0209F08.D

	Compound	1 Level 1	5 Level 2	10 Level 3	30 Level 4	60 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2	
1	Dichlorodifluoromethane	0.33312	0.33020	0.31893	0.31517	0.30987	AVRG		0.32146		3.08224	
2	Chloromethane	0.18530	0.18782	0.19851	0.17474	0.17512	AVRG		0.18430		5.36413	✓
3	Vinyl Chloride	0.19718	0.18919	0.17179	0.13351	0.10385	AVRG		0.15910		24.79214	✓ passed (<30)
4	Bromomethane	0.18591	0.15998	0.15885	0.13850	0.13012	AVRG		0.15467		14.03615	
5	Chloroethane	0.16733	0.15396	0.14649	0.13128	0.12525	AVRG		0.14486		11.75202	
6	Trichlorofluoromethane	0.65925	0.62040	0.58285	0.61325	0.57272	AVRG		0.60970		5.60488	
7	Acetone	15188	20324	29367	82768	164770	LINR	0.60809	0.01564		0.99611	
8	1,1-Dichloroethene	0.31224	0.26274	0.26572	0.25537	0.23391	AVRG		0.26600		10.78513	✓
9	Methylene Chloride	0.29014	0.23870	0.22870	0.21483	0.20407	AVRG		0.23529		14.18609	
10	1,1,2-Trichlorotrifluoroeth	0.37880	0.35123	0.36933	0.34766	0.32131	AVRG		0.35367		6.26832	

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Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAY-1998 18:11
End Cal Date : 09-FEB-1999 19:36
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_F.i\020999.B\FVOAW.M
Cal Date : 10-Feb-1999 09:52 VoigtG

Compound	1 Level 1	5 Level 2	10 Level 3	30 Level 4	60 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2	
11 Carbon Disulfide	0.76306	0.78050	0.74309	0.73027	0.68431	AVRG		0.74025		4.95335	
12 trans-1,2-Dichloroethene	0.38670	0.33258	0.32040	0.30949	0.29885	AVRG		0.32960		10.40456	
13 1,1-Dichloroethane	0.64651	0.58104	0.55885	0.53526	0.49349	AVRG		0.56303		10.09318	✓
14 Vinyl acetate	0.14233	0.13677	0.15459	0.15421	0.15265	AVRG		0.14811		5.46230	
15 2-Butanone	12665	27404	64067	182278	365967	LINR	0.08696	0.03650		0.99950	<
16 cis 1,2-Dichloroethene	0.29662	0.25863	0.25265	0.24570	0.24271	AVRG		0.25926		8.40048	
17 Bromochloromethane	0.11178	0.09791	0.09695	0.09445	0.08596	AVRG		0.09741		9.55806	<
18 Chloroform	0.62562	0.55955	0.55427	0.53247	0.50353	AVRG		0.55509		8.13958	✓
19 2,2 Dichloropropane	0.63050	0.58281	0.54847	0.52301	0.48573	AVRG		0.55410		10.02141	
22 1,2 Dichloroethane	0.30170	0.26785	0.26649	0.26196	0.25169	AVRG		0.26994		6.98381	
23 1,1,1-Trichloroethane	0.71619	0.63236	0.62692	0.59183	0.56952	AVRG		0.62737		8.91879	
24 1,1-Dichloropropene	0.55623	0.51701	0.49505	0.48326	0.45590	AVRG		0.50149		7.52065	
25 Carbon Tetrachloride	0.53598	0.50762	0.50533	0.49402	0.46910	AVRG		0.50241		4.81626	
26 Benzene	1.00006	0.86626	0.84005	0.80160	0.75947	AVRG		0.85349		10.69984	
28 Dibromomethane	0.15403	0.13963	0.14227	0.13626	0.13025	AVRG		0.14049		6.26631	
29 1,2-Dichloropropane	0.33545	0.29508	0.28240	0.26810	0.24541	AVRG		0.28529		11.76433	✓
30 Trichloroethene	0.36875	0.32829	0.31688	0.29267	0.25578	AVRG		0.31248		13.42840	

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Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAY-1998 18:11
End Cal Date : 09-FEB-1999 19:36
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_F.i\020999.B\FVOAW.M
Cal Date : 10-Feb-1999 09:52 VoigtG

Compound	1 Level 1	5 Level 2	10 Level 3	30 Level 4	60 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2	
31 Bromodichloromethane	0.49946	0.47627	0.46686	0.45595	0.42695	AVRG		0.46510		5.73686	
32 2-chloroethyl vinyl ether	0.09693	0.09168	0.08965	0.08989	0.08776	AVRG		0.09118		3.83799	<
33 cis-1,3-Dichloropropene	0.42992	0.38551	0.37464	0.36982	0.35954	AVRG		0.38388		7.13119	
34 4-Methyl 2 pentanone	0.10603	0.10936	0.10942	0.10959	0.10776	AVRG		0.10843		1.41387	
35 trans-1,3-Dichloropropene	0.29841	0.27210	0.27293	0.27811	0.27089	AVRG		0.27849		4.11865	
36 1,1,2-Trichloroethane	0.42455	0.35038	0.36027	0.36164	0.34722	AVRG		0.36881		8.61376	
38 Toluene	3.02468	2.63972	2.55004	2.48289	2.31934	AVRG		2.60333		10.10570	✓
39 1,3-Dichloropropane	0.66528	0.63160	0.64386	0.65536	0.62055	AVRG		0.64333		2.78395	
40 2-Hexanone	0.14578	0.16818	0.16154	0.17256	0.16917	AVRG		0.16344		6.51832	
41 Dibromochloromethane	0.60957	0.58981	0.59769	0.60292	0.57250	AVRG		0.59450		2.39950	
42 1,2-Dibromoethane	0.48157	0.44488	0.45342	0.46416	0.44623	AVRG		0.45805		3.32026	
43 Tetrachloroethene	0.76115	0.68854	0.67351	0.63236	0.54518	AVRG		0.66015		12.01771	
44 1,1,1,2-Tetrachloroethane	0.70072	0.63507	0.64811	0.62270	0.55856	AVRG		0.63303		8.08000	
46 1 Chlorohexane	1.65354	1.41162	1.34220	1.22975	1.08123	AVRG		1.34367		15.89641	<
47 Chlorobenzene	1.80614	1.59285	1.52250	1.43355	1.27217	AVRG		1.52544	✓	12.94330	
48 Ethylbenzene	1.15828	0.99512	0.94155	0.91740	0.84430	AVRG		0.97133		12.12136	✓
49 (m,p)- Xylene	1.49438	1.18732	1.11216	1.04657	0.90809	AVRG		1.14971		18.98832	<

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Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAY-1998 18:11
End Cal Date : 09-FEB-1999 19:36
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_F.i\020999.B\FVOAW.M
Cal Date : 10-Feb-1999 09:52 VoigtG

	Compound	1 Level 1	5 Level 2	10 Level 3	30 Level 4	60 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2
	50 Bromoform	0.30853	0.29654	0.30213	0.31006	0 30014	AVRG		0.30348	✓	1.87781
M	51 Total Xylenes	0 42752	0.34955	0.33162	0.32786	0.29973	AVRG		0.34726		13.90557
	52 Styrene	1.81491	1.64762	1.61361	1.64687	1.54939	AVRG		1.65448		5.93406
	53 1,1,2,2 Tetrachloroethane	0.41949	0 43576	0.43064	0.42832	0.39365	AVRG		0.42157	✓	3.95710
	54 (o) Xylene	1.28257	1.04864	0.99487	0.98357	0.89920	AVRG		1.04177		13.90557
	55 1,2,3-Trichloropropane	0.30844	0.28804	0.29563	0.30320	0.29676	AVRG		0.29841		2.60413
	56 Isopropylbenzene	4.08268	3.61258	3.42686	3.24338	2.84424	AVRG		3.44195		13.28664
	58 Bromobenzene	0.97088	0.90444	0.89429	0.83117	0.78945	AVRG		0.87805		7.97763
	59 n-Propylbenzene	7.32622	6.34514	6.05552	5.74717	5.53519	AVRG		6.20185		11.27926
	60 2-Chlorotoluene	4.39660	3.87944	3.75732	3.54739	3.21848	AVRG		3.75984		11.57787
	61 4-Chlorotoluene	4.08046	3.73641	3.62108	3.46926	3.31566	AVRG		3.64457		7.97474
	62 1,3,5-Trimethylbenzene	3.88878	3.36599	3.26735	3.14340	3.01489	AVRG		3.33608		10.06957
	63 tert-Butylbenzene	3.98246	3.50595	3.34597	3.13614	2.93286	AVRG		3.38067		11.82627
	64 1,2,4-Trimethylbenzene	3.59132	3.06775	2.92053	2.85170	2.80140	AVRG		3.04654		10.52377
	65 sec-Butylbenzene	6.73623	5.89730	5.68092	5.27928	4.89392	AVRG		5.69753		12.22259
	66 1,3-Dichlorobenzene	1.90954	1.73368	1.66839	1.55931	1.48622	AVRG		1.67143		9.80616
	68 1,4 Dichlorobenzene	1.84809	1.66373	1.63619	1.59619	1.51704	AVRG		1.65225		7.42287

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Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAY-1998 18:11
End Cal Date : 09-FEB-1999 19:36
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_F.i\020999.B\FVOAW.M
Cal Date : 10-Feb-1999 09:52 VoigtG

Compound	1 Level 1	5 Level 2	10 Level 3	30 Level 4	60 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2	
69 4 Isopropyltoluene	4.44241	3.80093	3.69081	3.58806	3.48146	AVRG		3.80073		9.94078	
70 1,2-Dichlorobenzene	1.45570	1.35877	1.31725	1.29348	1.26080	AVRG		1.33720		5.62769	
71 n-Butylbenzene	4.43942	3.95567	3.85200	3.77201	3.76760	AVRG		3.95734		7.07834	
72 1,2-Dibromo 3 chloropropane	0.11502	0.11196	0.11904	0.12099	0.12304	AVRG		0.11801		3.80737	
73 1,2,4-Trichlorobenzene	0.68126	0.66304	0.64358	0.62249	0.63483	AVRG		0.64904		3.58926	
74 Napthalene	0.50835	0.56608	0.52803	0.51370	0.54236	AVRG		0.53170		4.38945	
75 Hexachlorobutadiene	0.97088	0.85876	0.80972	0.67412	0.60196	AVRG		0.78309		18.76625	<
76 1,2,3-Trichlorobenzene	0.44622	0.47864	0.45114	0.44647	0.44954	AVRG		0.45440		3.01631	
$ 20 Dibromofluoromethane	0.41977	0.39420	0.39389	0.37316	0.34205	AVRG		0.38461		7.53092	
$ 21 1,2-Dichloroethane-d4	0.21264	0.22401	0.21153	0.20619	0.20114	AVRG		0.21110		4.05128	
$ 37 Toluene d8	2.57316	2.23163	2.20282	2.17851	2.04895	AVRG		2.24701		8.68905	
$ 57 Bromofluorobenzene	48433	404522	410589	1093432	2007526	LINR	0.15944	0.96159		0.99638	

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 12-MAY-1998 18:11
End Cal Date : 09-FEB-1999 19:36
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_F.i\020999.B\FVOAW.M
Cal Date : 10-Feb-1999 09:52 VoigtG

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = [illegible] Rsp/m1	Response

Quanterra - Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCMS_F.i
Lab File ID: 0330F03.D
Analysis Type: WATER
Lab Sample ID: CCV
Quant Type: ISTD

Injection Date: 30-MAR-1999 10:38
Init. Calibration Date(s): 05/12/98 02/09/99
Init. Calibration Times: 18:11 19:36
Method File: \GCMS_F.i\033099.b\FVOAW.M

	COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D	
	1 Dichlorodifluoromethane	0.321	0.327	0.100	-1.8	20.0	
	2 Chloromethane	0.184	0.172	0.100	6.5	20.0	
	3 Vinyl Chloride	0.159	0.169	0.100	-6.0	20.0	
	4 Bromomethane	0.155	0.188	0.100	-21.4	20.0	<-
	5 Chloroethane	0.145	0.134	0.100	7.4	20.0	
	6 Trichlorofluoromethane	0.610	0.620	0.100	-1.6	20.0	
	7 Acetone	17.447	20.000	0.100	12.8	20.0	
	8 1,1-Dichloroethene	0.266	0.269	0.100	-1.0	20.0	
	9 Methylene Chloride	0.235	0.220	0.100	6.4	20.0	
	10 1,1,2-Trichlorotrifluoroeth	0.354	0.360	0.100	-1.7	20.0	
	11 Carbon Disulfide	0.740	0.675	0.100	8.7	20.0	
	12 trans-1,2-Dichloroethene	0.330	0.315	0.100	4.4	20.0	
	13 1,1-Dichloroethane	0.563	0.551	0.100	2.2	20.0	
	14 Vinyl acetate	0.148	0.160	0.100	-8.1	20.0	
	15 2-Butanone	19.242	20.000	0.100	3.8	20.0	
	16 cis 1,2-Dichloroethene	0.259	0.245	0.100	5.5	20.0	
	17 Bromochloromethane	0.097	0.091	0.100	6.6	20.0	<-
	18 Chloroform	0.555	0.548	0.100	1.2	20.0	
	19 2,2-Dichloropropane	0.554	0.567	0.100	-2.3	20.0	
$	20 Dibromofluoromethane	0.385	0.374	0.100	2.7	20.0	
$	21 1,2-Dichloroethane-d4	0.211	0.201	0.100	5.0	20.0	
	22 1,2-Dichloroethane	0.270	0.252	0.100	6.6	20.0	
	23 1,1,1-Trichloroethane	0.627	0.626	0.100	0.2	20.0	
	24 1,1-Dichloropropene	0.501	0.506	0.100	-0.9	20.0	
	25 Carbon Tetrachloride	0.502	0.471	0.100	6.3	20.0	
	26 Benzene	0.853	0.837	0.100	2.0	20.0	
	28 Dibromomethane	0.140	0.130	0.100	7.4	20.0	
	29 1,2-Dichloropropane	0.285	0.285	0.100	0.1	20.0	
	30 Trichloroethene	0.312	0.312	0.100	-0.0	20.0	
	31 Bromodichloromethane	0.465	0.458	0.100	1.6	20.0	
	32 2-chloroethyl vinyl ether	0.091	0.079	0.100	13.3	20.0	<-
	33 cis-1,3-Dichloropropene	0.384	0.360	0.100	6.2	20.0	
	34 4-Methyl-2-pentanone	0.108	0.095	0.100	12.0	20.0	<-
	35 trans-1,3-Dichloropropene	0.278	0.256	0.100	8.2	20.0	
	36 1,1,2-Trichloroethane	0.369	0.346	0.100	6.3	20.0	
$	37 Toluene-d8	2.247	2.209	0.100	1.7	20.0	

Quanterra - Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCMS_F.i
Lab File ID: 0330F03.D
Analysis Type: WATER
Lab Sample ID: CCV
Quant Type: ISTD

Injection Date: 30-MAR-1999 10:38
Init. Calibration Date(s): 05/12/98 02/09/99
Init. Calibration Times: 18:11 19:36
Method File: \GCMS_F.i\033099.b\FVOAW.M

		COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
	38	Toluene	2.603	2.577	0.100	1.0	20.0
	39	1,3-Dichloropropane	0.643	0.615	0.100	4.4	20.0
	40	2-Hexanone	0.163	0.155	0.100	5.3	20.0
	41	Dibromochloromethane	0.594	0.563	0.100	5.3	20.0
	42	1,2-Dibromoethane	0.458	0.431	0.100	5.8	20.0
	43	Tetrachloroethene	0.660	0.675	0.100	-2.3	20.0
	44	1,1,1,2-Tetrachloroethane	0.633	0.607	0.100	4.1	20.0
	46	1-Chlorohexane	1.344	1.365	0.100	-1.6	20.0
	47	Chlorobenzene	1.525	1.512	0.100	0.9	20.0
	48	Ethylbenzene	0.971	0.943	0.100	2.9	20.0
	49	(m,p)- Xylene	1.150	1.116	0.100	2.9	20.0
	50	Bromoform	0.303	0.271	0.100	10.6	20.0
M	51	Total Xylenes	0.347	0.336	0.100	3.4	20.0
	52	Styrene	1.654	1.631	0.100	1.4	20.0
	53	1,1,2,2-Tetrachloroethane	0.422	0.399	0.100	5.4	20.0
	54	(o)-Xylene	1.042	1.007	0.100	3.4	20.0
	55	1,2,3-Trichloropropane	0.298	0.273	0.100	8.7	20.0
	56	Isopropylbenzene	3.442	3.515	0.100	-2.1	20.0
$	57	Bromofluorobenzene	10.190	10.000	0.100	-1.9	20.0
	58	Bromobenzene	0.878	0.848	0.100	3.5	20.0
	59	n-Propylbenzene	6.202	6.477	0.100	-4.4	20.0
	60	2-Chlorotoluene	3.760	3.833	0.100	-1.9	20.0
	61	4-Chlorotoluene	3.645	3.725	0.100	-2.2	20.0
	62	1,3,5-Trimethylbenzene	3.336	3.542	0.100	-6.2	20.0
	63	tert-Butylbenzene	3.381	3.534	0.100	-4.5	20.0
	64	1,2,4-Trimethylbenzene	3.047	3.202	0.100	-5.1	20.0
	65	sec-Butylbenzene	5.698	6.117	0.100	-7.4	20.0
	66	1,3-Dichlorobenzene	1.671	1.699	0.100	-1.6	20.0
	68	1,4-Dichlorobenzene	1.652	1.653	0.100	-0.0	20.0
	69	4-Isopropyltoluene	3.801	4.086	0.100	-7.5	20.0
	70	1,2-Dichlorobenzene	1.337	1.316	0.100	1.6	20.0
	71	n-Butulbenzene	3.957	4.468	0.100	-12.9	20.0
	72	1,2-Dibromo-3-chloropropane	0.118	0.101	0.100	14.1	20.0
	73	1,2,4-Trichlorobenzene	0.649	0.706	0.100	-8.8	20.0
	74	Napthalene	0.532	0.548	0.100	-3.0	20.0

Quanterra - Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCMS_F.i
Lab File ID: 0330F03.D
Analysis Type: WATER
Lab Sample ID: CCV
Quant Type: ISTD

Injection Date: 30-MAR-1999 10:38
Init. Calibration Date(s): 05/12/98 02/09/99
Init. Calibration Times: 18:11 19:36
Method File: \GCMS_F.i\033099.b\FVOAW.M

COMPOUND	RRF	RF10	MIN RRF	%D	MAX %D
75 Hexachlorobutadiene	0.783	0.840	0.100	-7.2	20.0
76 1,2,3-Trichlorobenzene	0.454	0.484	0.100	-6.5	20.0

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

Lab File ID: 0330F02 BFB Injection Date: 03/30/99

Instrument ID: GCMS_F BFB Injection Time: 1009

GC Column: ID: 2.00 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.9
75	30.0 - 60.0% of mass 95	49.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.2 (0.5)1
174	Greater than 50.0% of mass 95	51.4
175	4.0 - 9.0% of mass 174	3.8 (7.4)1
176	95.0 - 101.0% of mass 174	50.4 (98.0)1
177	5.0 - 9.0% of mass 176	3.2 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCV 10PPB	CCV	0330F03	03/30/99	1038
02	LCS AQUEOUS	LCS	0330F04	03/30/99	1111
03	BLANK AQUEOU	BLANK	0330F05	03/30/99	1144
04	063664-04	063664-04	0330F06	03/30/99	1246
05	063664-01	063664-01	0330F07	03/30/99	1319
06	063664-02	063664-02	0330F08	03/30/99	1352
07	063664-03	063664-03	0330F09	03/30/99	1426
08	063664-03 MS	063664-03 MS	0330F10	03/30/99	1459
09	063664-03 SD	063664-03 SD	0330F11	03/30/99	1533
10					
11					
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20					
21					
22					

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

GC Column: ID: 0.53 (mm) Init. Calib. Date(s): 05/12/98 02/09/99

Instrument ID: GCMS_F

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 9.29 S2 : 13.19

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	CCV 10PPB	CCV	03/30/99	1038	9.29	13.19
02	LCS AQUEOUS	LCS	03/30/99	1111	9.29	13.18
03	BLANK AQUEOU	BLANK	03/30/99	1144	9.29	13.18
04	063664-04	063664-04	03/30/99	1246	9.30	13.19
05	063664-01	063664-01	03/30/99	1319	9.28	13.17
06	063664-02	063664-02	03/30/99	1352	9.29	13.18
07	063664-03	063664-03	03/30/99	1426	9.30	13.19
08	063664-03 MS	063664-03 MS	03/30/99	1459	9.29	13.19
09	063664-03 SD	063664-03 SD	03/30/99	1533	9.29	13.20
10						
11						
12						
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32						

QC LIMITS
S1 = 1,2-Dichloroethane-d4 (+/- 2.00 MINUTES)
S2 = Toluene-d8 (+/- 2.00 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

GC Column: ID: 0.53 (mm) Init. Calib. Date(s): 05/12/98 02/09/99

Instrument ID: GCMS_F

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S3 : 17.41 S4 : 8.66

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S3 RT #	S4 RT #
01	CCV 10PPB	CCV	03/30/99	1038	17.41	8.66
02	LCS AQUEOUS	LCS	03/30/99	1111	17.39	8.65
03	BLANK AQUEOU	BLANK	03/30/99	1144	17.40	8.65
04	063664-04	063664-04	03/30/99	1246	17.41	8.67
05	063664-01	063664-01	03/30/99	1319	17.39	8.64
06	063664-02	063664-02	03/30/99	1352	17.39	8.65
07	063664-03	063664-03	03/30/99	1426	17.40	8.67
08	063664-03 MS	063664-03 MS	03/30/99	1459	17.41	8.66
09	063664-03 SD	063664-03 SD	03/30/99	1533	17.41	8.66
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

S3 = Bromofluorobenzene (+/- 2.00 MINUTES)
S4 = Dibromofluoromethane (+/- 2.00 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 063664

GC Column: ID: 2.00 (mm) Init. Calib. Date(s):

Instrument ID: GCMS_F

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

			MEAN SURROGATE RT FROM INITIAL CALIBRATION			
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01			03/30/99	1009		
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
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29						
30						
31						
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

SAMPLE INFORMATION SUMMARY

BATCH: /GCMS_F.i/033099.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
0330F01.D	30-MAR-1999 09:34	Unknown	1.00	GCMS_F	FVOAW.M	033099.b
0330F02.D	30-MAR-1999 10:09	BFB	1.00	GCMS_F	FBFB.M	033099.b
0330F03.D	30-MAR-1999 10:38	Continuing Cal	1.00	GCMS_F	FVOAW.M	033099.b
0330F04.D	30-MAR-1999 11:11	LCS	1.00	GCMS_F	FVOAW.M	033099.b
0330F05.D	30-MAR-1999 11:44	BLANK	1.00	GCMS_F	FVOAW.M	033099.b
0330F06.D	30-MAR-1999 12:46	Unknown	1.00	GCMS_F	FVOAW.M	033099.b
0330F07.D	30-MAR-1999 13:19	Unknown	1.00	GCMS_F	FVOAW.M	033099.b
0330F08.D	30-MAR-1999 13:52	Unknown	1.00	GCMS_F	FVOAW.M	033099.b
0330F09.D	30-MAR-1999 14:26	Unknown	1.00	GCMS_F	FVOAW.M	033099.b
0330F10.D	30-MAR-1999 14:59	MS	1.00	GCMS_F	FVOAW.M	033099.b
0330F11.D	30-MAR-1999 15:33	MSD	1.00	GCMS_F	FVOAW.M	033099.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
0330F01.D	LIQUID	VOA		45a	Sta. Blank	AK474-44a
0330F02.D	LIQUID	VOA		033099		033099
0330F03.D	LIQUID	VOA	CCV	033099	CCV 10ppb	063664
0330F04.D	LIQUID	VOA	LCS	033099	LCS aqueous	063664
0330F05.D	LIQUID	VOA	Blank	033099	Blank aqueous	063664
0330F06.D	LIQUID	VOA	063664-04	033099	063664-04	063664
0330F07.D	LIQUID	VOA	063664-01	033099	063664-01	063664
0330F08.D	LIQUID	VOA	063664-02	033099	063664-02	063664
0330F09.D	LIQUID	VOA	063664-03	033099	063664-03	063664
0330F10.D	LIQUID	VOA	063664-03 ms	033099	063664-03 ms	063664
0330F11.D	LIQUID	VOA	063664-03 sd	033099	063664-03 sd	063664

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
0330F01.D	all.sub		4567	4568	61	4566
0330F02.D	all.sub		4570	4571	314	4569
0330F03.D	all.sub		4572	4571	61	4566
0330F04.D	all.sub	LAB-LCS-H2O.spk	4573	4571	61	4566
0330F05.D	all.sub		4574	4571	61	4566
0330F06.D	all.sub		4575	4571	61	4566
0330F07.D	all.sub		4576	4571	61	4566
0330F08.D	all.sub		4577	4571	61	4566
0330F09.D	all.sub		4578	4571	61	4566
0330F10.D	all.sub	LAB-MS-H2O.spk	4579	4571	61	4566
0330F11.D	all.sub	LAB-MS-H2O.spk	4580	4571	61	4566

METHOD

AK102/AK103

COE Certificate of Analysis Surrogate Recovery Summary Sheet

Client Name: Montgomery Watson
Project ID: 063664 Received: 29 MAR 99
Project Name: Site 5 Gambell Client Project:

960000

Client ID	Lab ID	Matrix	Units	Surrogate	Result	Qual	Control Limits	Method
99GAMTAP001	0001-SA	Aqueous	ug/L	o-Terphenyl	79%		50-150	AK102
99GAMNVW001	0002-SA	Aqueous	ug/L	o-Terphenyl	82%		50-150	AK102
99GAMNVW201	0003-SA	Aqueous	ug/L	o-Terphenyl	73%		50-150	AK102

Certificate of Analysis Lab QC Blank Surrogate Recovery Summary Sheet

Client Name: Montgomery Watson
Project ID: 063664 Received: 29 MAR 99
Project Name: Site 5 Gambell Client Project:

Lab Lot	Lab Run	Matrix	Units	Surrogate	Result	Qual	Control Limits	Method
30 MAR 99-1	30 MAR 99-B	Aqueous	ug/L	o-Terphenyl	82%		60-120	AK102

Certificate of Analysis Lab QC DCS Surrogate Recovery Summary Sheet

960000

Client Name: Montgomery Watson
Project ID: 063664 Received: 29 MAR 99
Project Name: Site 5 Gambell Client Project:

Lab Lot	Matrix	Units	Surrogate	Spike Amount	DCS1	DCS2	Qual	Control Limits	Method
30 MAR 99-1	Aqueous	ug/L	o-Terphenyl	100	80%	80%		60-120	AK102

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

AQMB 3/30

Lab Name: QUANTERRA AK Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID: 03309B05 Lab Sample ID: AQMB 3/30

Instrument ID: GCFID_B Date Extracted:

Matrix: (soil/water) WATER Date Analyzed: 03/30/99

Level: (low/med) LOW Time Analyzed: 1418

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	AQLCS 3/30	AQLCS 3/30	03309B06	03/30/99
02	AQDCS 3/30	AQDCS 3/30	03309B07	03/30/99
03	63664-1	63664-1	03309B08	03/30/99
04	63664-2	63664-2	03309B09	03/30/99
05	63664-2MS	63664-2MS	03309B10	03/30/99
06	63664-2SD	63664-2SD	03309B11	03/30/99
07	63664-3	63664-3	03309B12	03/30/99
08				
09				
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COMMENTS:

Quanterra Alaska

INITIAL CALIBRATION DATA

000100

Start Cal Date : 23-FEB-1999 19:46
End Cal Date : 23-FEB-1999 21:44
Quant Method : ESTD
Target Version : 3.40
Integrator : HP Genie
Method file : \GCFID_B.i\022399B.B\AK102_3r.m
Cal Date : 25-Feb-1999 09:54 SenaJ

Calibration File Names:
Level 1: \GCFID_B.i\022399B.B\02239B11.D
Level 2: \GCFID_B.i\022399B.B\02239B12.D
Level 3: \GCFID_B.i\022399B.B\02239B13.D
Level 4: \GCFID_B.i\022399B.B\02239B14.D
Level 5: \GCFID_B.i\022399B.B\02239B15.D

	Compound	20 Level 1	25 Level 2	50 Level 3	100 Level 4	200 Level 5	Curve	Coefficients b	m1	m2	%RSD or R^2
S	1 DRO	48921299	9248794	5175328	2348353	746418	LINR	15.10155	9807		0.99978
	3 Phenanthrene d10	6009902	2924276	1174492	615021	238761	LINR	13.99604	15549		0.99841
	2 n Pentacontane	6990294	1438530	1178091	723622	284366	LINR	13.23127	18079		0.99840
S	6 RRO	37283771	17181206	7520174	3509013	1662736	LINR	46.00646	7445		0.99819
$	4 o Terphenyl	19160	13975	15325	13057	13757	AVRG		15095		16.70679
$	5 n Tetracontane-d82	2796127	1291779	519925	340841	162176	LINR	-0.22621	13777		0.99691

Quanterra Alaska

INITIAL CALIBRATION DATA

000101

Start Cal Date : 23-FEB-1999 19:46
End Cal Date : 23-FEB-1999 21:44
Quant Method : ESTD
Target Version : 3.40
Integrator : HP Genie
Method file : \GCFID_B.i\022399B.B\AK102_3r.m
Cal Date : 25-Feb-1999 09:54 SenaJ

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B01.D
Lab Smp Id: mecl Client Smp ID: mecl
Inj Date : 30-MAR-1999 10:52
Operator : TRA Inst ID: GCFID_B.i
Smp Info : mecl
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 09:48 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * Vt/ Ws

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	Final extract Volume
Ws	25.000	Weight of sample extracted (g)

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
S	1 DRO	3.320-14.340			240010	25.9519	1.03808
$	4 o-Terphenyl	Compound Not Detected.					
$	5 n-Triacontane-d62	Compound Not Detected.					
S	6 RRO	14.340-19.160			353962	49.8277	1.99311

Quanterra Alaska

RECOVERY REPORT

Client Name: Client SDG: 664
Sample Matrix: SOLID Fraction: SV
Lab Smp Id: mecl Client Smp ID: mecl
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_3lcs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED mg/Kg	CONC RECOVERED mg/Kg	% RECOVERED	LIMITS
$ 4 o-Terphenyl	4.00000	0.000000	*	60-120
$ 5 n-Triacontane-d62	2.80000	0.000000	*	0-120

Dat. : /GCFID_B.i/033099B.B/03309B01.D

Page

Date : 30-MAR-1999 10:52

Client ID: mecl

Instrument: GCFID_B.i

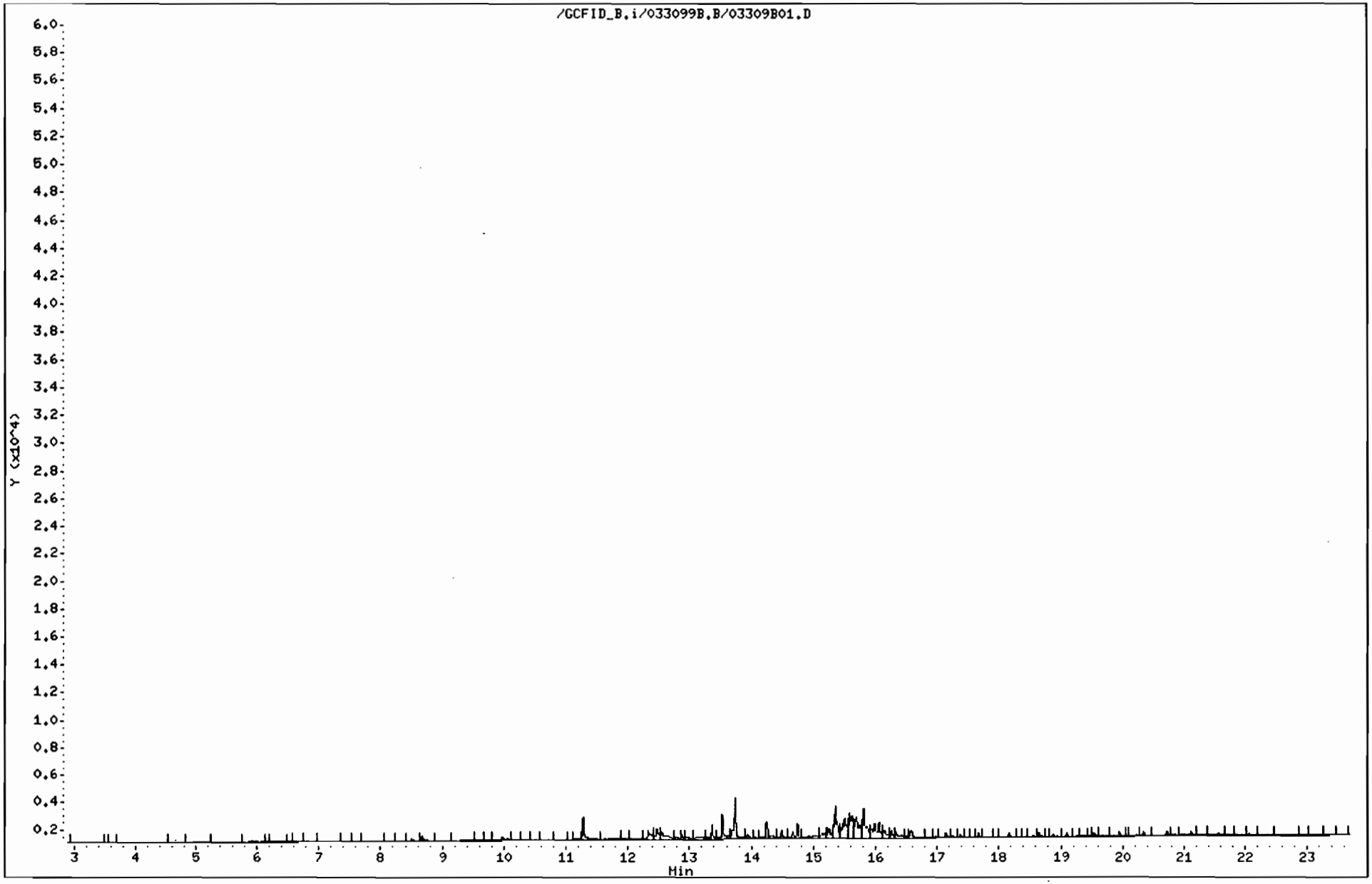
Sample Info: mecl

Operator: TRA

Column phase: DB624

Column diameter: 0.32

0001047



Quanterra Alaska

Data file : \GCFID_B.i\033099B.B\03309B02.D
Lab Smp Id: alkane Client Smp ID: alkane
Inj Date : 30-MAR-1999 11:22
Operator : TRA Inst ID: GCFID_B.i
Smp Info : alkane
Misc Info : ak441-3-2
Comment :
Method : \GCFID_B.i\031799B.B\alkane.m
Meth Date : 03-Mar-1999 09:20 SenaJ Quant Type: ISTD
Cal Date : 14-MAY-1998 18:21 Cal File: 05148B02.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF

Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (mg/Kg)
2 C10	3.240	3.277	(1.000)	152277		
3 C12	5.430	5.520	(1.000)	272239		
4 C14	7.277	7.297	(1.000)	310766		
5 C16	8.860	8.883	(1.000)	327375		
7 C20	11.557	11.663	(1.000)	343745		
8 C22	12.730	12.973	(1.000)	348873		
9 C24	13.817	14.060	(1.000)	357241		
10 C25	14.350	14.507	(1.000)	570777		
11 C26	14.823	14.857	(1.000)	365856		
12 C28	15.753	15.780	(1.000)	368285		
13 C30	16.627	16.657	(1.000)	371646		
14 C32	17.450	17.480	(1.000)	380392		
15 C34	18.223	18.363	(1.000)	386897		
16 C36	18.960	18.977	(1.000)	439918		
17 C38	19.653	19.650	(1.000)	415791		
18 C40	20.303	20.293	(1.000)	410420		

→ D = 3.9 %

→ D = 4.1 %

MK 3/31/99

Dat e: /GCFID_B.i/033099B.B/03309B02.D

Pag.

Date : 30-MAR-1999 11:22

Client ID: alkane

Instrument: GCFID_B.i

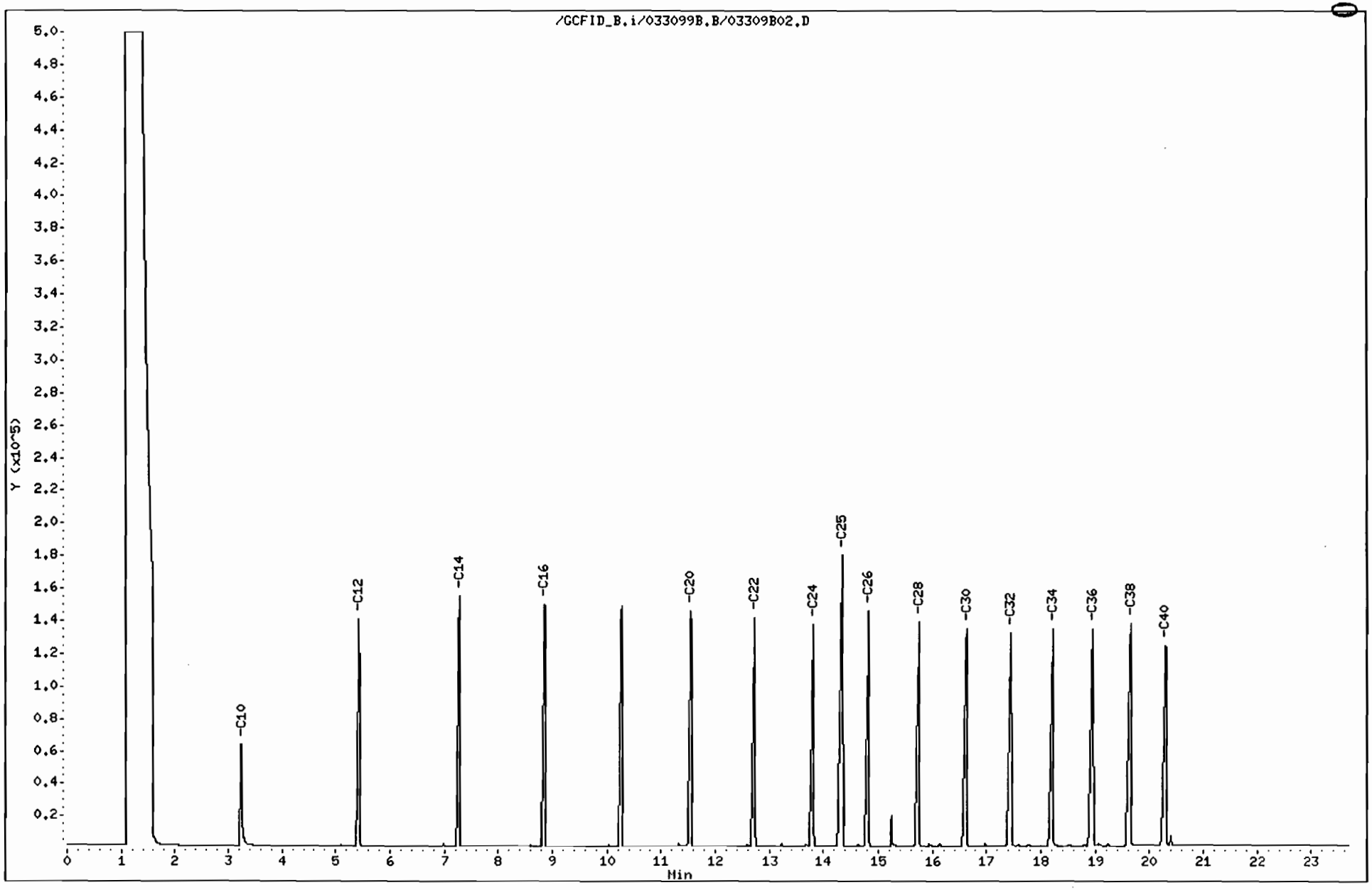
Sample Info: alkane

Operator: TRA

Column phase:

Column diameter: 2.00

000106



Quanterra Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCFID_B.i
Lab File ID: 03309B03.D
Analysis Type: SOIL
Lab Sample ID: dro ccv
Quant Type: ESTD

Injection Date: 30-MAR-1999 11:51
Init. Calibration Date(s): 02/23/99 02/23/99
Init. Calibration Times: 19:46 21:44
Method File: \GCFID_B.i\031199B.B\AK102_3r.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
S	1 DRO	9248.260	9143.798	0.100	1.1	25.0
S	4 o-Terphenyl	15094.730	12551.710	0.100	16.8	25.0

Quanterra Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCFID_B.i
Lab File ID: 03309B04.D
Analysis Type: SOIL
Lab Sample ID: rro ccv
Quant Type: ESTD

Injection Date: 30-MAR-1999 13:10
Init. Calibration Date(s): 02/23/99 02/23/99
Init. Calibration Times: 19:46 21:44
Method File: \GCFID_B.i\031199B.B\AK102_3r.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
$	5 n-Triacontane-d62	38.289	40.000	0.100	4.3	25.0
S	6 RRO	7103.716	7544.983	0.100	-6.2	25.0

Quanterra Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCFID_B.i
Lab File ID: 03309B13.D
Analysis Type: SOIL
Lab Sample ID: dro ccv
Quant Type: ESTD

Injection Date: 31-MAR-1999 08:15
Init. Calibration Date(s): 02/23/99 02/23/99
Init. Calibration Times: 19:46 21:44
Method File: \GCFID_B.i\031199B.B\AK102_3r.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
S	1 DRO	9248.260	9189.402	0.100	0.6	25.0
$	4 o-Terphenyl	15094.730	12464.940	0.100	17.4	25.0

Quanterra Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCFID_B.i
Lab File ID: 03309B14.D
Analysis Type: SOIL
Lab Sample ID: rro ccv
Quant Type: ESTD

Injection Date: 31-MAR-1999 08:44
Init. Calibration Date(s): 02/23/99 02/23/99
Init. Calibration Times: 19:46 21:44
Method File: \GCFID_B.i\031199B.B\AK102_3r.m

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
$	5 n-Triacontane-d62	36.286	40.000	0.100	9.3	25.0
S	6 RRO	7103.716	7541.058	0.100	-6.2	25.0

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA AK Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

GC Column: DB624 · ID: 0.32 (mm) Init. Calib. Date(s): 02/23/99 02/23/99

Instrument ID: GCFID_B

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 16.37 S2 : 10.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	MECL	MECL	03/30/99	1052		
02	ALKANE	ALKANE	03/30/99	1122		
03	DRO CCV	DRO CCV	03/30/99	1151		10.83
04	RRO CCV	RRO CCV	03/30/99	1310	16.37	
05	AQMB 3/30	AQMB 3/30	03/30/99	1418	16.39	10.83
06	AQLCS 3/30	AQLCS 3/30	03/30/99	1448	16.39	10.83
07	AQDCS 3/30	AQDCS 3/30	03/30/99	1547	16.39	10.83
08	63664-1	63664-1	03/30/99	1617	16.38	10.83
09	63664-2	63664-2	03/30/99	1647	16.38	10.82
10	63664-2MS	63664-2MS	03/30/99	1717	16.39	10.83
11	63664-2SD	63664-2SD	03/30/99	1747	16.39	10.83
12	63664-3	63664-3	03/30/99	1816	16.37	10.82
13	DRO CCV	DRO CCV	03/31/99	0815		10.83
14	RRO CCV	RRO CCV	03/31/99	0844	16.36	

QC LIMITS

S1 = n-Triacontane-d62 (+/- 0.20 MINUTES)
S2 = o-Terphenyl (+/- 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

METHOD

SW8260

SAMPLE INFORMATION SUMMARY

BATCH: GCFID_B.i/022399B.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
02239B01.D	23-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B02.D	23-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	alkane.m	022399B.B
02239B03.D	23-FEB-1999 [illegible]	Continuing Cal	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B04.D	23-FEB-1999 [illegible]	BLANK	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B05.D	23-FEB-1999 16:47	METHSPIKE	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B06.D	23-FEB-1999 17:17	METHSPIKE	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B07.D	23-FEB-1999 17:47	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B08.D	23-FEB-1999 18:16	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B09.D	23-FEB-1999 18:46	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B10.D	23-FEB-1999 19:16	Continuing Cal	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B11.D	23-FEB-1999 19:46	Cal Level 1	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B12.D	23-FEB-1999 20:15	Cal Level 2	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B13.D	23-FEB-1999 20:45	Cal Level 3	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B14.D	23-FEB-1999 21:15	Cal Level 4	1.00	GCFID_B	AK102_3r.m	022399B.B

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Grc
02239B01.D	SOLID	SV	mec11			
02239B02.D	LIQUID	SV		05148B	alkane(C10-C40)	05148B
02239B03.D	SOLID	SV	dro ccv			
02239B04.D	LIQUID	SV	water mb 2/23			
02239B05.D	LIQUID	SV	water lcs 2/23			
02239B06.D	LIQUID	SV	water lcsd 2/23			
02239B07.D	LIQUID	SV	63599-2			
02239B08.D	LIQUID	SV	63599-7			
02239B09.D	SOLID	SV	mec12			
02239B10.D	SOLID	SV	dro ccv			
02239B11.D	SOLID	SV	rro 5000/200			
02239B12.D	SOLID	SV	rro 2500/100			
02239B13.D	SOLID	SV	rro 1000/40			
02239B14.D	SOLID	SV	rro 500/20			

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
02239B01.D	ak102_103.sub	ak02_31cs.spk	6000	5999	2571	59
02239B02.D	all.sub		5998	5999	147	59
02239B03.D	ak102.sub	ak02_31cs.spk	6001	5999	2571	59
02239B04.D	ak102.sub	ak02_31cs.spk	6002	6035	2571	59
02239B05.D	ak102.sub	ak02_31cs.spk	6003	6035	2571	59
02239B06.D	ak102.sub	ak02_31cs.spk	6004	6035	2571	59
02239B07.D	ak102.sub	ak02_31cs.spk	6005	6035	2571	59
02239B08.D	ak102.sub	ak02_31cs.spk	6006	6035	2571	59
02239B09.D	ak102_103.sub	ak02_31cs.spk	6007	6035	2571	59
02239B10.D	ak102.sub	ak02_31cs.spk	6008	6035	2571	59
02239B11.D	ak103.sub	ak02_31cs.spk	6009	6035	6036	59
02239B12.D	ak103.sub	ak02_31cs.spk	6010	6035	6036	59
02239B13.D	ak103.sub	ak02_31cs.spk	6011	6035	6036	59
02239B14.D	ak103.sub	ak02_31cs.spk	6012	6035	6036	59

SAMPLE INFORMATION SUMMARY

BATCH: GCFID_B.i/022399B.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
02239B15.D	23-FEB [illegible]	Cal Level [illegible]	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B16.D	23-FEB [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B17.D	23-FEB-1999 21:43	METHSPIKE	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B18.D	23-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B19.D	23-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B20.D	24-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B21.D	24-FEB-1999 00:42	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B22.D	24-FEB-1999 01:12	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B23.D	24-FEB-1999 01:41	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B24.D	24-FEB-1999 02:11	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B25.D	24-FEB-1999 02:41	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B26.D	24-FEB-1999 03:11	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B27.D	24-FEB-1999 03:41	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B28.D	24-FEB-1999 04:10	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Grou
02239B15.D	SOLID	SV	rro 250/10			
02239B16.D	SOLID	SV	rro sec source			
02239B17.D	SOLID	SV	soxtnerm mb 2/17			
02239B18.D	SOLID	SV	idc 1			
02239B19.D	SOLID	SV	idc 2			
02239B20.D	SOLID	SV	idc 3			
02239B21.D	SOLID	SV	idc 4			
02239B22.D	SOLID	SV	mec12			
02239B23.D	SOLID	SV	mdl 1			
02239B24.D	SOLID	SV	mdl 2			
02239B25.D	SOLID	SV	mdl 3			
02239B26.D	SOLID	SV	mdl 4			
02239B27.D	SOLID	SV	mdl 5			
02239B28.D	SOLID	SV	mdl 6			

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
02239B15.D	ak103.sub	ak02_31cs.spk	6013	6035	6036	599
02239B16.D	ak103.sub	ak02_31cs.spk	6014	6035	2571	599
02239B17.D	ak103.sub	ak02_31cs.spk	6015	6035	2571	599
02239B18.D	ak103.sub	ak02_31cs.spk	6016	6035	2571	599
02239B19.D	ak103.sub	ak02_31cs.spk	6017	6035	2571	599
02239B20.D	ak103.sub	ak02_31cs.spk	6018	6035	2571	599
02239B21.D	ak103.sub	ak02_31cs.spk	6019	6035	2571	599
02239B22.D	ak102_103.sub	ak02_31cs.spk	6020	6035	2571	599
02239B23.D	ak103.sub	ak02_31cs.spk	6021	6035	2571	599
02239B24.D	ak103.sub	ak02_31cs.spk	6022	6035	2571	599
02239B25.D	ak103.sub	ak02_31cs.spk	6023	6035	2571	599
02239B26.D	ak103.sub	ak02_31cs.spk	6024	6035	2571	599
02239B27.D	ak103.sub	ak02_31cs.spk	6025	6035	2571	599
02239B28.D	ak103.sub	ak02_31cs.spk	6026	6035	2571	599

SAMPLE INFORMATION SUMMARY

BATCH: GCFID_B.i/022399B.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
02239B29.D	24-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B30.D	24-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B31.D	24-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B32.D	24-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B33.D	24-FEB-1999 [illegible]	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B34.D	24-FEB-1999 07:37	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B35.D	24-FEB-1999 07:37	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B36.D	24-FEB-1999 08:06	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B37.D	24-FEB-1999 08:36	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B38.D	24-FEB-1999 08:36	Continuing Cal	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B39.D	24-FEB-1999 08:41	Unknown	10.00	GCFID_B	AK102_3r.m	022399B.B
02239B40.D	24-FEB-1999 11:11	Continuing Cal	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B41.D	24-FEB-1999 11:41	Continuing Cal	1.00	GCFID_B	AK102_3r.m	022399B.B
02239B42.D	24-FEB-1999 11:11	Unknown	1.00	GCFID_B	AK102_3r.m	022399B.B

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Grou
02239B29.D	SOLID	SV	mdl 7			
02239B30.D	LIQUID	SV	mdl 1			
02239B31.D	LIQUID	SV	mdl 2			
02239B32.D	LIQUID	SV	mdl 3			
02239B33.D	LIQUID	SV	mdl 4			
02239B34.D	LIQUID	SV	mdl 5			
02239B35.D	LIQUID	SV	mdl 6			
02239B36.D	LIQUID	SV	mdl 7			
02239B37.D	LIQUID	SV	mdl 8			
02239B38.D	SOLID	SV	dro ccv			
02239B39.D	LIQUID	SV	63599-2 x10			
02239B40.D	SOLID	SV	dro ccv			
02239B41.D	SOLID	SV	rro ccv			
02239B42.D	SOLID	SV	dro surrogate			

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
02239B29.D	ak103.sub	ak02_31cs.spk	6027	6035	2571	595
02239B30.D	ak102_103.sub	ak02_31cs.spk	6028	6035	2571	595
02239B31.D	ak102_103.sub	ak02_31cs.spk	6029	6035	2571	595
02239B32.D	ak102_103.sub	ak02_31cs.spk	6030	6035	2571	595
02239B33.D	ak102_103.sub	ak02_31cs.spk	6031	6035	2571	595
02239B34.D	ak102_103.sub	ak02_31cs.spk	6032	6035	2571	595
02239B35.D	ak102_103.sub	ak02_31cs.spk	6033	6035	2571	595
02239B36.D	ak102_103.sub	ak02_31cs.spk	6034	6035	6036	595
02239B37.D	ak102_103.sub	ak02_31cs.spk	6077	6035	6036	595
02239B38.D	ak102.sub	ak02_31cs.spk	6037	6035	6036	595
02239B39.D	ak102.sub	ak02_31cs.spk	6078	6035	6036	595
02239B40.D	ak102.sub	ak02_31cs.spk	6079	6035	6036	59
02239B41.D	ak103.sub	ak02_31cs.spk	6080	6035	6036	59
02239B42.D	ak102.sub	ak02_31cs.spk	6081	6035	6036	59

SAMPLE INFORMATION SUMMARY

BATCH: /GCFID_B.i/033099B.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
03309B01.D	30-MAR-1999 10:52	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B02.D	30-MAR-1999 11:22	Unknown	1.00	GCFID_B	alkane.m	031799B.B
03309B03.D	30-MAR-1999 11:51	Continuing Cal	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B04.D	30-MAR-1999 13:10	Continuing Cal	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B05.D	30-MAR-1999 14:18	BLANK	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B06.D	30-MAR-1999 14:48	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B07.D	30-MAR-1999 15:47	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B08.D	30-MAR-1999 16:17	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B09.D	30-MAR-1999 16:47	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B10.D	30-MAR-1999 17:17	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B11.D	30-MAR-1999 17:47	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B12.D	30-MAR-1999 18:16	Unknown	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B13.D	31-MAR-1999 08:15	Continuing Cal	1.00	GCFID_B	AK102_3r.m	031199B.B
03309B14.D	31-MAR-1999 08:44	Continuing Cal	1.00	GCFID_B	AK102_3r.m	031199B.B

Print Confirmation TKI 3/31/99

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
03309B01.D	SOLID	SV	mecl		mecl	664
03309B02.D	SOLID	SV	alkane		alkane	664
03309B03.D	SOLID	SV	dro ccv		dro ccv	664
03309B04.D	SOLID	SV	rro ccv		rro ccv	664
03309B05.D	LIQUID	SV	aqmb 3/30	330	aqmb 3/30	664
03309B06.D	LIQUID	SV	aqlcs 3/30	330	aqlcs 3/30	664
03309B07.D	LIQUID	SV	aqdcs 3/30	330	aqdcs 3/30	664
03309B08.D	LIQUID	SV	63664-1	330	63664-1	664
03309B09.D	LIQUID	SV	63664-2	330	63664-2	664
03309B10.D	LIQUID	SV	63664-2ms	330	63664-2ms	664
03309B11.D	LIQUID	SV	63664-2sd	330	63664-2sd	664
03309B12.D	LIQUID	SV	63664-3	330	63664-3	664
03309B13.D	SOLID	SV	dro ccv		dro ccv	664
03309B14.D	SOLID	SV	rro ccv		rro ccv	664

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
03309B01.D	ak102_103.sub	ak02_3lcs.spk	6371	6360	6130	6209
03309B02.D	all.sub	ak02_3lcs.spk	6372	6376	147	6261
03309B03.D	ak102.sub	ak02_3lcs.spk	6359	6360	6130	6209
03309B04.D	ak103.sub	ak02_3lcs.spk	6362	6360	6130	6209
03309B05.D	ak102_103.sub	ak02_3lcs.spk	6363	6376	6130	6209
03309B06.D	ak102_103.sub	ak02_3lcs.spk	6364	6376	6130	6209
03309B07.D	ak102_103.sub	ak02_3lcs.spk	6366	6376	6130	6209
03309B08.D	ak102_103.sub	ak02_3lcs.spk	6373	6376	6130	6209
03309B09.D	ak102_103.sub	ak02_3lcs.spk	6374	6376	6130	6209
03309B10.D	ak102_103.sub	ak02_3lcs.spk	6375	6376	6130	6209
03309B11.D	ak102_103.sub	ak02_3lcs.spk	6367	6376	6130	6209
03309B12.D	ak102_103.sub	ak02_3lcs.spk	6368	6376	6130	6209
03309B13.D	ak102.sub	ak02_3lcs.spk	6369	6376	6130	6209
03309B14.D	ak103.sub	ak02_3lcs.spk	6370	6376	6130	6209

METHOD

SW8270

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

	CLIENT SAMPLE NO.	S1 (2FP)#	S2 (PHL)#	S3 (NBZ)#	S4 (FBP)#	S5 (TBP)#	S6 (TPH)#	S7 #	S8 #	TOT OUT
01	AQ-MB 4/1	22	17	40	47	70	87			0
02	AQ-LCS 4/1	38	30	72	70	91	91			0
03	63664-1	26	20	50	55	69	80			0
04	63664-2	23	8*	44	51	71	85			1
05	63664-2 MS	35	26	69	72	92	84			0
06	63664-2 SD	35	24	73	76	91	87			0
07	63664-3	30	13*	60	67	84	92			1
08										
09										
10										
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	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(17- 67)
S2 (PHL) = Phenol-d5	(16- 47)
S3 (NBZ) = Nitrobenzene-d5	(34-110)
S4 (FBP) = 2-Fluorobiphenyl	(30-113)
S5 (TBP) = 2,4,6-Tribromophenol	(43-130)
S6 (TPH) = Terphenyl-d14	(46-129)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

AQ-MB 4/1

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID: 04059E11 Lab Sample ID: BLANK

Instrument ID: GCMS_E Date Extracted:

Matrix: (soil/water) WATER Date Analyzed: 04/05/99

Level: (low/med) LOW Time Analyzed: 0947

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	AQ-LCS 4/1	LCS	04059E12	04/05/99
02	63664-1	63664-1	04059E13	04/05/99
03	63664-2	63664-2	04059E14	04/05/99
04	63664-2 MS	63664-2 MS	04059E15	04/05/99
05	63664-2 SD	63664-2 SD	04059E16	04/05/99
06	63664-3	63664-3	04059E17	04/05/99
07				
08				
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COMMENTS:

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID (Standard): 03229E07 Date Analyzed: 03/22/99

Instrument ID: GCMS_E Time Analyzed: 1509

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	149320	6.77	487349	8.51	235028	11.15
	UPPER LIMIT	298640	7.27	974698	9.01	470056	11.65
	LOWER LIMIT	74660	6.27	243675	8.01	117514	10.65
	CLIENT SAMPLE NO.						
01		183356	6.78	567468	8.52	231148	11.14
02	TCLP MB 3/19	212917	6.78	703639	8.52	301528	11.14
03	TCLP LCS 3/1	195019	6.78	635643	8.52	268807	11.14
04	63633-2	162007	6.78	548436	8.52	254163	11.14
05	63633-2 MS	203477	6.78	693930	8.52	323483	11.15
06	63633-2 SD	160803	6.79	505041	8.51	238380	11.15
07	63633-4	201352	6.78	692394	8.52	307890	11.15
08	63633-6	297393	6.78	994265*	8.52	463486	11.16
09	63633-10	188001	6.78	647124	8.52	286170	11.15
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID (Standard): 03229E07 Date Analyzed: 03/22/99

Instrument ID: GCMS_E Time Analyzed: 1509

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	343152	13.49	253946	16.88	182937	18.31
	UPPER LIMIT	686304	13.99	507892	17.38	365874	18.81
	LOWER LIMIT	171576	12.99	126973	16.38	91469	17.81
	CLIENT SAMPLE NO.						
01		310883	13.48	253136	16.89	200973	18.32
02	TCLP MB 3/19	408950	13.48	295729	16.88	202134	18.32
03	TCLP LCS 3/1	381209	13.49	288071	16.87	215262	18.32
04	63633-2	371519	13.48	331263	16.89	259046	18.32
05	63633-2 MS	447767	13.49	318118	16.88	236893	18.32
06	63633-2 SD	331726	13.49	284939	16.88	222794	18.32
07	63633-4	408256	13.49	288542	16.88	209255	18.32
08	63633-6	579839	13.50	531842*	16.89	422648*	18.32
09	63633-10	367584	13.49	284979	16.89	220266	18.32
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID (Standard): 04059E10 Date Analyzed: 04/05/99

Instrument ID: GCMS_E Time Analyzed: 0849

		IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
	12 HOUR STD	231867	6.78	721883	8.53	299415	11.16
	UPPER LIMIT	463734	7.28	1443766	9.03	598830	11.66
	LOWER LIMIT	115934	6.28	360942	8.03	149708	10.66
	CLIENT SAMPLE NO.						
01	AQ-MB 4/1	179176	6.77	610808	8.52	287817	11.15
02	AQ-LCS 4/1	204186	6.79	700311	8.52	313474	11.17
03	63664-1	233845	6.77	792213	8.51	358804	11.16
04	63664-2	213292	6.77	687418	8.51	290380	11.16
05	63664-2 MS	224320	6.78	777270	8.53	338267	11.16
06	63664-2 SD	220898	6.78	695924	8.53	295070	11.16
07	63664-3	214950	6.78	722207	8.52	324564	11.15
08		220964	6.79	716567	8.52	306305	11.17
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID (Standard): 04059E10 Date Analyzed: 04/05/99

Instrument ID: GCMS_E Time Analyzed: 0849

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	370703		13.50		248160		16.92		197980		18.36	
	UPPER LIMIT	741406		14.00		496320		17.42		395960		18.86	
	LOWER LIMIT	185352		13.00		124080		16.42		98990		17.86	
	CLIENT SAMPLE NO.												
01	AQ-MB 4/1	426806		13.50		334197		16.92		248883		18.37	
02	AQ-LCS 4/1	442974		13.51		365545		16.92		236560		18.37	
03	63664-1	489350		13.51		369280		16.91		275568		18.37	
04	63664-2	403187		13.51		300338		16.91		218523		18.37	
05	63664-2 MS	481732		13.51		410683		16.93		302625		18.38	
06	63664-2 SD	429186		13.51		367327		16.92		273944		18.37	
07	63664-3	456436		13.50		335693		16.92		248469		18.37	
08		421612		13.51		347597		16.92		244217		18.36	
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

000122

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1999 09:14
End Cal Date : 22-MAR-1999 16:22
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_E.i\032299E.B\AK8270C.M
Cal Date : 23-Mar-1999 09:17 AustinT

Calibration File Names:
Level 1: \GCMS_E.i\032299E.B\03229E09.D
Level 2: \GCMS_E.i\032299E.B\03229E04.D
Level 3: \GCMS_E.i\032299E.B\03229E05.D
Level 4: \GCMS_E.i\032299E.B\03229E02.D
Level 5: \GCMS_E.i\032299E.B\03229E06.D
Level 6: \GCMS_E.i\032299E.B\03229E07.D

	160	120	100	50	20	10		Coefficients			%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
1 N-Nitrosodimethylamine	574253	408784	377945	205266	73628	17139	LINR	0.10448	1.01605		0.99810
2 Pyridine	1778833	1263991	1141130	616407	238734	65183	LINR	0.20241	1.56262		0.99753
5 Phenol	1.78743	1.77620	1.73030	1.77472	1.88356	1.74774	AVRG		1.78332		2.99541
6 Aniline	1.88069	1.91223	1.85666	1.89892	1.92239	2.20480	AVRG		1.94595		6.62643
7 Bis(2-chloroethyl)ether	1.39833	1.35633	1.35483	1.38297	1.55567	1.45044	AVRG		1.41643		5.41360
8 2-Chlorophenol	1.33151	1.30248	1.33719	1.31712	1.50066	1.44291	AVRG		1.37198		5.85630
9 1,3-Dichlorobenzene	1.57009	1.57572	1.53220	1.52493	1.69169	1.66081	AVRG		1.59257		4.30385
11 1,4-Dichlorobenzene	1.58922	1.57682	1.56230	1.57758	1.74903	1.69796	AVRG		1.62548		4.80400
12 Benzyl Alcohol	1.04696	1.05925	1.03026	1.02893	1.22521	1.16030	AVRG		1.09182		7.47465

000123

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1999 09:14
End Cal Date : 22-MAR-1999 16:22
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_E.i\032299E.B\AK8270C.M
Cal Date : 23-Mar-1999 09:17 AustinT

Compound	160 Level 1	120 Level 2	100 Level 3	50 Level 4	20 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
13 1,2-Dichlorobenzene	1.44924	1.43804	1.40341	1.40589	1.61086	1.52515	AVRG		1.47210		5.50639
14 2-Methylphenol	1.04696	1.05925	1.03026	1.02893	1.22521	1.16030	AVRG		1.09182		7.47465
15 bis(2 Chloroisopropyl)ether	1.24625	1.26546	1.32685	1.23415	1.42884	1.24916	AVRG		1.29178		5.78470
16 4-Methylphenol	1.07174	1.04448	1.04276	1.09774	1.31155	1.28101	AVRG		1.14155		10.68013
17 N-Nitrosodinpropylamine	0.87958	0.83847	0.81029	0.79975	0.96903	0.88754	AVRG		0.86411		7.22581
18 Hexachloroethane	0.65403	0.65326	0.65270	0.65149	0.71941	0.69191	AVRG		0.67047		4.27008
20 Nitrobenzene	0.43517	0.44800	0.42891	0.43351	0.44651	0.43856	AVRG		0.43844		1.71422
21 Isophorone	0.65288	0.69811	0.63855	0.64975	0.75290	0.70880	AVRG		0.68350		6.46622
22 2-Nitrophenol	0.22056	0.22170	0.21597	0.22016	0.23997	0.21447	AVRG		0.22214		4.13257
23 2,4-Dimethyphenol	0.35006	0.34955	0.33029	0.32588	0.36359	0.34428	AVRG		0.34394		4.04460
24 Benzoic Acid	0.23099	0.22022	0.18659	0.19183	0.18548	0.17861	AVRG		0.19895		10.72877
25 Bis(2-chloroethoxy)methane	0.43562	0.44061	0.42517	0.42218	0.47952	0.45543	AVRG		0.44309		4.84073
26 2,4-Dichlorophenol	0.28513	0.28726	0.27784	0.27507	0.30596	0.28712	AVRG		0.28640		3.78413
27 1,2,4 Trichlorobenzene	0.32093	0.32908	0.31487	0.32578	0.34866	0.34283	AVRG		0.33036		3.92827
29 Naphthalene	1.03489	1.04248	1.00292	1.03361	1.12522	1.11501	AVRG		1.05902		4.65791
30 4-Chloroaniline	0.37560	0.37669	0.35868	0.35530	0.42523	0.42054	AVRG		0.38534		7.88240
31 Hexachlorobutadiene	0.19948	0.20032	0.19440	0.20032	0.20563	0.20647	AVRG		0.20110		2.20257

000124

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1999 09:14
End Cal Date : 22-MAR-1999 16:22
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_E.i\032299E.B\AK8270C.M
Cal Date : 23-Mar-1999 09:17 AustinT

Compound	160 Level 1	120 Level 2	100 Level 3	50 Level 4	20 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
32 4-Chloro-3-Methylphenol	0.27878	0.26991	0.24612	0.24753	0.30193	0.28683	AVRG		0.27185		8.11711
33 2-Methylnaphthalene	0.58224	0.58171	0.54249	0.54524	0.58039	0.60808	AVRG		0.57336		4.37566
34 Hexachlorocyclopentadiene	0.42939	0.45029	0.48440	0.48804	0.43567	0.39840	AVRG		0.44770		7.66703
35 2,4,6-Trichlorophenol	0.41770	0.41740	0.41339	0.38624	0.42592	0.37596	AVRG		0.40610		4.93921
36 2,4,5-Trichlorphenol	0.40330	0.40402	0.40648	0.40314	0.47428	0.40627	AVRG		0.41625		6.83921
38 2-Chloronaphthalene	1.50533	1.62707	1.52834	1.61621	1.57431	1.40383	AVRG		1.54251		5.37797
39 1 Chloronaphthalene	1.50533	1.24016	1.37288	1.32074	1.37759	1.50316	AVRG		1.38664		7.47612
40 2-Nitroaniline	0.40975	0.41372	0.38409	0.39251	0.40427	0.36709	AVRG		0.39524		4.46605
41 Dimethyl Phthalate	1.28279	1.25504	1.18011	1.20393	1.45062	1.42192	AVRG		1.29907		8.67287
42 2,6-Dinitrotoluene	0.31813	0.32824	0.30022	0.29898	0.34282	0.30694	AVRG		0.31589		5.47219
43 Acenaphthylene	1.72686	1.74346	1.73415	1.73913	1.96558	1.85403	AVRG		1.79387		5.38724
44 3-Nitroaniline	0.35010	0.37844	0.33309	0.33645	0.36182	0.34061	AVRG		0.35008		4.95730
46 Acenaphthene	1.07696	1.08397	1.06076	1.07254	1.22036	1.15304	AVRG		1.11127		5.63666
47 2,4-Dinitrophenol	0.26259	0.26734	0.22762	0.21624	0.21359	0.16877	AVRG		0.22603		16.04354
48 4-Nitrophenol	0.21907	0.24108	0.19529	0.19100	0.19929	0.18436	AVRG		0.20501		10.34358
49 2,4-Dinitrotoluene	0.40676	0.42663	0.37989	0.36698	0.42073	0.38715	AVRG		0.39802		5.96722
50 Dibenzofuran	1.54431	1.57222	1.51204	1.50349	1.74340	1.67272	AVRG		1.59136		6.04870

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1999 09:14
End Cal Date : 22-MAR-1999 16:22
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_E.i\032299E.B\AK8270C.M
Cal Date : 23-Mar-1999 09:17 AustinT

Compound	160 Level 1	120 Level 2	100 Level 3	50 Level 4	20 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
51 Diethylphthalate	1.24953	1.31840	1.17269	1.17375	1.42787	1.42492	AVRG		1.29452		8.92954
52 4-Chlorophenyl-phenylether	0.55015	0.56299	0.53090	0.54688	0.62657	0.62741	AVRG		0.57415		7.34808
53 4-Nitroaniline	0.32936	0.36793	0.30700	0.30319	0.34786	0.32640	AVRG		0.33029		7.43832
54 Fluorene	1.18360	1.19720	1.08269	1.11540	1.28901	1.27023	AVRG		1.18969		6.87131
55 4,6-Dinitro-2-methylphenol	0.21223	0.21199	0.21179	0.19633	0.18968	0.16195	AVRG		0.19733		10.02743
56 N-Nitrosodiphenylamine	0.49119	0.50697	0.53169	0.55517	0.51760	0.45773	AVRG		0.51006		6.59815
57 Azobenzene	1.05632	1.01812	1.05065	1.10498	1.19014	1.10472	AVRG		1.08749		5.56039
59 4-Bromophenyl-phenylether	0.21405	0.20718	0.21233	0.21925	0.24147	0.22503	AVRG		0.21989		5.55169
60 Hexachlorobenzene	0.24901	0.22902	0.24370	0.24416	0.26914	0.25332	AVRG		0.24806		5.31727
61 Pentachlorophenol	0.17627	0.17606	0.16874	0.16518	0.16525	0.13009	AVRG		0.16360		10.48150
63 Phenanthrene	1.07130	1.05656	1.06674	1.07949	1.20365	1.15142	AVRG		1.10486		5.35216
64 Anthracene	1.07884	1.06149	1.07675	1.07802	1.20272	1.11437	AVRG		1.10203		4.74789
65 Carbazole	4.04340	4.26712	3.27955	3.00610	4.24671	4.47608	AVRG		3.88649		15.39661
66 Di-n-Butylphthalate	1.49160	1.51248	1.46405	1.42394	1.57216	1.46713	AVRG		1.48856		3.39982
67 Fluoranthene	1.03401	1.08428	1.02805	1.00511	1.09511	1.02578	AVRG		1.04539		3.42818
68 Benzidine	0.41161	0.54639	0.39101	0.44827	0.44023	0.49437	AVRG		0.45531		12.47990
69 Pyrene	1.20476	1.14963	1.18686	1.22537	1.48633	1.42785	AVRG		1.28013		10.97799

000126

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1999 09:14
End Cal Date : 22-MAR-1999 16:22
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_E.i\032299E.B\AK8270C.M
Cal Date : 23-Mar-1999 09:17 AustinT

	Compound	160 Level 1	120 Level 2	100 Level 3	50 Level 4	20 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	71 Butylbenzylphthalate	0.75604	0.74020	0.73944	0.72071	0.85652	0.78040	AVRG		0.76555		6.37823
	72 bis(2-ethylhexyl)Phthalate	1.09266	1.04482	1.03399	1.01974	1.24469	1.14461	AVRG		1.09675		7.81793
	73 3,3' Dichlorobenzidine	0.48659	0.53617	0.44569	0.44080	0.43323	0.39760	AVRG		0.45668		10.55931
	74 Benzo(a)Anthracene	1.12346	1.13945	1.11494	1.12626	1.35784	1.32055	AVRG		1.19708		9.27140
	76 Chrysene	1.01744	0.99102	0.99110	0.99215	1.25131	1.16162	AVRG		1.06744		10.47529
	77 Di-n-octylphthalate	2.41304	2.32576	2.29413	2.21758	2.49554	2.37660	AVRG		2.35378		4.12009
	78 Benzo(b)fluoranthene	1.48279	1.62598	1.52477	1.33195	1.68781	1.60674	AVRG		1.54334		8.21733
	79 Benzo(k)fluoranthene	1.48279	1.37858	1.37163	1.61233	1.55747	1.72671	AVRG		1.52159		9.10847
	80 Benzo(a)pyrene	1.22962	1.25598	1.19686	1.21627	1.37322	1.38410	AVRG		1.27601		6.41692
	82 Dibenzo(a,h)anthracene	1.28765	1.33550	1.22239	1.19917	1.30829	1.20984	AVRG		1.26047		4.54728
	83 Indeno(1,2,3-cd)pyrene	1.49193	1.53053	1.42945	1.42709	1.53453	1.46055	AVRG		1.47902		3.22795
	84 Benzo(g,h,i)perylene	1.23220	1.24608	1.20896	1.21103	1.34970	1.26894	AVRG		1.25282		4.19115
$	3 2-Fluorophenol	1.45944	1.43512	1.46582	1.60815	1.51722	1.51701	AVRG		1.50046		4.14112
$	4 Phenol-d5	1.67585	1.63884	1.65642	1.80152	1.82003	1.67262	AVRG		1.71088		4.60054
$	19 Nitrobenzene-d5	0.44623	0.44781	0.43178	0.48335	0.43811	0.40908	AVRG		0.44273		5.49741
$	37 2 Fluorobiphenyl	1.24959	1.27530	1.33105	1.38747	1.34520	1.26885	AVRG		1.30958		4.07349

Quanterra - Alaska

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAR-1999 09:14
End Cal Date : 22-MAR-1999 16:22
Quant Method : ISTD
Target Version : 3.40
Integrator : HP RTE
Method file : \GCMS_E.i\032299E.B\AK8270C.M
Cal Date : 23-Mar-1999 09:17 AustinT

Compound	160 Level 1	120 Level 2	100 Level 3	50 Level 4	20 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 58 2,4,6-Tribromophenol	0.12301	0.11330	0.11851	0.12461	0.11957	0.10294	AVRG		0.11699		6.77537
$ 70 Terphenyl-d14	0.78592	0.74187	0.78701	0.82540	0.90543	0.84286	AVRG		0.81475		6.95112

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

DFTPP TUNE/TAILING FACTOR/DEGRADATION SUMMARY RESULTS

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	30 - 60% of mass 198	45.68		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	56.37		PASS
70	Less than 2% of mass 69	0.00	(0.00)	PASS
127	40 - 60% of mass 198	47.35		PASS
197	0 - 1% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.12		PASS
275	10 - 30% of mass 198	20.55		PASS
365	Greater than 1% of mass 198	3.04		PASS
441	Present, but less than mass 443	12.45	(79.97)	PASS
442	Greater than 40% of mass 198	83.05		PASS
443	17 - 23% of mass 442	15.58	(18.75)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.0644172	5.000	PASS
Benzidine	1.1895803	3.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	112727			N/A
4,4-DDE	0	0.0	15.0	PASS
4,4-DDD	454	0.4	15.0	PASS
4,4-DDD + DDE	454	0.4	15.0	PASS

****

Tuning Sample, /GCMS_E.i/032299E.B/03229E01.D/03229E01.D,*** PASSED ***

****

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID: 03229E01 DFTPP Injection Date: 03/22/99

Instrument ID: GCMS_E DFTPP Injection Time: 0852

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	56.4
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	20.5
365	Greater than 1.0% of mass 198	3.04
441	Present, but less than mass 443	12.5
442	Greater than 40.0% of mass 198	83.0
443	17.0 - 23.0% of mass 442	15.6 (18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		50/100 CCV	03229E02	03/22/99	0914
02		160/320	03229E03	03/22/99	1048
03		120/240	03229E04	03/22/99	1319
04		100/200	03229E05	03/22/99	1356
05		20/40	03229E06	03/22/99	1433
06		10/20	03229E07	03/22/99	1509
07		SECOND SOURCE	03229E08	03/22/99	1546
08	TCLP MB 3/19	BLANK	03229E09	03/22/99	1622
09	TCLP LCS 3/1	LCS	03229E10	03/22/99	1659
10	63633-2	63633-2	03229E11	03/22/99	1735
11	63633-2 MS	63633-2 MS	03229E12	03/22/99	1812
12	63633-2 SD	63633-2 SD	03229E13	03/22/99	1848
13	63633-4	63633-4	03229E14	03/22/99	1924
14	63633-6	63633-6	03229E15	03/22/99	2001
15	63633-10	63633-10	03229E16	03/22/99	2037
16					
17					
18					
19					
20					
21					
22					

Quanterra - Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCMS_E.i
Lab File ID: 04059E10.D
Analysis Type: WATER
Lab Sample ID: 50/100 ccv
Quant Type: ISTD

Injection Date: 05-APR-1999 08:49
Init. Calibration Date(s): 03/22/99 03/30/99
Init. Calibration Times: 09:14 12:31
Method File: \GCMS_E.i\040599E.B\AK8270C.M

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
	1 N-Nitrosodimethylamine	46.136	50.000	0.050	7.7	25.0
	2 Pyridine	85.328	100.000	0.050	14.7	25.0
$	3 2-Fluorophenol	1.500	1.317	0.050	12.2	25.0
$	4 Phenol-d5	1.711	1.494	0.050	12.6	25.0
	5 Phenol	1.783	1.778	0.050	0.3	20.0
	6 Aniline	1.946	1.725	0.050	11.4	25.0
	7 Bis(2-chloroethyl)ether	1.416	1.326	0.050	6.4	25.0
	8 2-Chlorophenol	1.372	1.309	0.050	4.6	25.0
	9 1,3-Dichlorobenzene	1.593	1.440	0.050	9.6	25.0
	11 1,4-Dichlorobenzene	1.625	1.439	0.050	11.5	20.0
	12 Benzyl Alcohol	1.092	1.054	0.050	3.5	25.0
	13 1,2-Dichlorobenzene	1.472	1.335	0.050	9.3	25.0
	14 2-Methylphenol	1.092	1.054	0.050	3.5	25.0
	15 bis(2-Chloroisopropyl)ether	1.292	1.421	0.050	-10.0	25.0
	16 4-Methylphenol	1.142	1.072	0.050	6.1	25.0
	17 N-Nitrosodinpropylamine	0.864	0.841	0.050	2.6	25.0
	18 Hexachloroethane	0.670	0.647	0.050	3.5	25.0
$	19 Nitrobenzene-d5	0.443	0.417	0.050	5.8	25.0
	20 Nitrobenzene	0.438	0.411	0.050	6.4	25.0
	21 Isophorone	0.683	0.696	0.050	-1.8	25.0
	22 2-Nitrophenol	0.222	0.207	0.050	6.9	20.0
	23 2,4-Dimethyphenol	0.344	0.337	0.050	2.0	25.0
	24 Benzoic Acid	0.199	0.155	0.050	22.3	25.0
	25 Bis(2-chloroethoxy)methane	0.443	0.432	0.050	2.6	25.0
	26 2,4-Dichlorophenol	0.286	0.275	0.050	4.1	20.0
	27 1,2,4-Trichlorobenzene	0.330	0.295	0.050	10.6	25.0
	29 Naphthalene	1.059	1.009	0.050	4.7	25.0
	30 4-Chloroaniline	0.385	0.375	0.050	2.7	25.0
	31 Hexachlorobutadiene	0.201	0.187	0.050	7.0	20.0
	32 4-Chloro-3-Methylphenol	0.272	0.251	0.050	7.8	20.0
	33 2-Methylnaphthalene	0.573	0.514	0.050	10.3	25.0
	34 Hexachlorocyclopentadiene	0.448	0.339	0.050	24.2	25.0
	35 2,4,6-Trichlorophenol	0.406	0.366	0.050	9.8	20.0
	36 2,4,5-Trichlorphenol	0.416	0.378	0.050	9.1	25.0
$	37 2-Fluorobiphenyl	1.310	1.167	0.050	10.9	25.0

Quanterra - Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCMS_E.i
Lab File ID: 04059E10.D
Analysis Type: WATER
Lab Sample ID: 50/100 ccv
Quant Type: ISTD

Injection Date: 05-APR-1999 08:49
Init. Calibration Date(s): 03/22/99 03/30/99
Init. Calibration Times: 09:14 12:31
Method File: \GCMS_E.i\040599E.B\AK8270C.M

	COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D	
	38 2-Chloronaphthalene	1.543	1.548	0.050	-0.3	25.0	
	39 1-Chloronaphthalene	1.387	1.143	0.050	17.6	25.0	
	40 2-Nitroaniline	0.395	0.391	0.050	1.0	25.0	
	41 Dimethyl Phthalate	1.299	1.029	0.050	20.8	25.0	
	42 2,6-Dinitrotoluene	0.316	0.260	0.050	17.8	25.0	
	43 Acenaphthylene	1.794	1.489	0.050	17.0	25.0	
	44 3-Nitroaniline	0.350	0.304	0.050	13.0	25.0	
	46 Acenaphthene	1.111	1.039	0.050	6.5	20.0	
	47 2,4-Dinitrophenol	0.226	0.181	0.050	19.8	25.0	
	48 4-Nitrophenol	0.205	0.162	0.050	21.0	25.0	
	49 2,4-Dinitrotoluene	0.398	0.324	0.050	18.5	25.0	
	50 Dibenzofuran	1.591	1.638	0.050	-2.9	25.0	
	51 Diethylphthalate	1.295	1.096	0.050	15.3	25.0	
	52 4-Chlorophenyl-phenylether	0.574	0.490	0.050	14.6	25.0	
	53 4-Nitroaniline	0.330	0.266	0.050	19.4	25.0	
	54 Fluorene	1.190	1.052	0.050	11.6	25.0	
	55 4,6-Dinitro-2-methylphenol	0.197	0.180	0.050	8.8	25.0	
	56 N-Nitrosodiphenylamine	0.510	0.479	0.050	6.2	20.0	
	57 Azobenzene	1.087	1.034	0.050	4.9	25.0	
$	58 2,4,6-Tribromophenol	0.117	0.102	0.050	12.7	25.0	
	59 4-Bromophenyl-phenylether	0.220	0.187	0.050	14.8	25.0	
	60 Hexachlorobenzene	0.248	0.228	0.050	8.0	25.0	
	61 Pentachlorophenol	0.164	0.149	0.050	9.0	20.0	
	63 Phenanthrene	1.105	0.982	0.050	11.1	25.0	
	64 Anthracene	1.102	0.921	0.050	16.4	25.0	
	65 Carbazole	3.886	0.473	0.050	87.8	25.0	<-
	66 Di-n-Butylphthalate	1.489	1.265	0.050	15.0	25.0	
	67 Fluoranthene	1.045	0.885	0.050	15.3	20.0	
	68 Benzidine	0.764	0.043	0.050	94.4	25.0	<-
	69 Pyrene	1.280	1.349	0.050	-5.4	25.0	
$	70 Terphenyl-d14	0.815	0.789	0.050	3.1	25.0	
	71 Butylbenzylphthalate	0.766	0.737	0.050	3.8	25.0	
	72 bis(2-ethylhexyl)Phthalate	1.097	1.013	0.050	7.7	25.0	
	73 3,3'-Dichlorobenzidine	0.393	0.422	0.050	-7.4	25.0	
	74 Benzo(a)Anthracene	1.197	1.141	0.050	4.7	25.0	

Quanterra - Alaska

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: GCMS_E.i
Lab File ID: 04059E10.D
Analysis Type: WATER
Lab Sample ID: 50/100 ccv
Quant Type: ISTD

Injection Date: 05-APR-1999 08:49
Init. Calibration Date(s): 03/22/99 03/30/99
Init. Calibration Times: 09:14 12:31
Method File: \GCMS_E.i\040599E.B\AK8270C.M

COMPOUND	RRF	RF50	MIN RRF	%D	MAX %D
76 Chrysene	1.067	0.861	0.050	19.3	25.0
77 Di-n-octylphthalate	2.354	2.172	0.050	7.7	20.0
78 Benzo(b)fluoranthene	1.543	1.248	0.050	19.1	25.0
79 Benzo(k)fluoranthene	1.522	1.302	0.050	14.5	25.0
80 Benzo(a)pyrene	1.276	1.054	0.050	17.4	20.0
82 Dibenzo(a,h)anthracene	1.260	0.986	0.050	21.8	25.0
83 Indeno(1,2,3-cd)pyrene	1.479	1.213	0.050	18.0	25.0
84 Benzo(g,h,i)perylene	1.253	1.022	0.050	18.4	25.0

DFTPP TUNE/TAILING FACTOR/DEGRADATION SUMMARY RESULTS

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	30 - 60% of mass 198	43.98		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	57.33		PASS
70	Less than 2% of mass 69	0.23	(0.40)	PASS
127	40 - 60% of mass 198	50.23		PASS
197	0 - 1% of mass 198	0.00		PASS
199	5 - 9% of mass 198	7.12		PASS
275	10 - 30% of mass 198	19.59		PASS
365	Greater than 1% of mass 198	2.85		PASS
441	Present, but less than mass 443	12.37	(78.24)	PASS
442	Greater than 40% of mass 198	79.34		PASS
443	17 - 23% of mass 442	15.81	(19.93)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.8971651	5.000	PASS
Benzidine	1.9532758	3.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	95977			N/A
4,4-DDE	0	0.0	15.0	PASS
4,4-DDD	114	0.1	15.0	PASS
4,4-DDD + DDE	114	0.1	15.0	PASS

****

Tuning Sample, /GCMS_E.i/040599E.B/04059E09.D/04059E09.D,*** PASSED ***

****

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

Lab File ID: 04059E09 DFTPP Injection Date: 04/05/99

Instrument ID: GCMS_E DFTPP Injection Time: 0717

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	19.6
365	Greater than 1.0% of mass 198	2.85
441	Present, but less than mass 443	12.4
442	Greater than 40.0% of mass 198	79.3
443	17.0 - 23.0% of mass 442	15.8 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		50/100 CCV	04059E10	04/05/99	0849
02	AQ-MB 4/1	BLANK	04059E11	04/05/99	0947
03	AQ-LCS 4/1	LCS	04059E12	04/05/99	1023
04	63664-1	63664-1	04059E13	04/05/99	1058
05	63664-2	63664-2	04059E14	04/05/99	1133
06	63664-2 MS	63664-2 MS	04059E15	04/05/99	1208
07	63664-2 SD	63664-2 SD	04059E16	04/05/99	1243
08	63664-3	63664-3	04059E17	04/05/99	1318
09		SKP CHK	04059E18	04/05/99	1432
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

GC Column: DB-5MS ID: 0.32 (mm) Init. Calib. Date(s): 03/22/99 03/22/99

Instrument ID: GCMS_E

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 5.06 S2 : 6.33

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		50/100 CCV	03/22/99	0914	5.03	6.30
02		160/320	03/22/99	1048	5.06	6.33
03		120/240	03/22/99	1319	5.05	6.31
04		100/200	03/22/99	1356	5.04	6.32
05		20/40	03/22/99	1433	5.03	6.29
06		10/20	03/22/99	1509	5.03	6.28
07		SECOND SOURC	03/22/99	1546	5.04	6.30
08	ZZZZZ	ZZZZZ	03/22/99	1622	5.03	6.30
09	ZZZZZ	ZZZZZ	03/22/99	1659	5.05	6.30
10	ZZZZZ	ZZZZZ	03/22/99	1735	5.04	6.30
11	ZZZZZ	ZZZZZ	03/22/99	1812	5.07	6.30
12	ZZZZZ	ZZZZZ	03/22/99	1848	5.05	6.30
13	ZZZZZ	ZZZZZ	03/22/99	1924	5.05	6.30
14	ZZZZZ	ZZZZZ	03/22/99	2001	5.04	6.31
15	ZZZZZ	ZZZZZ	03/22/99	2037	5.06	6.32
16		50/100 CCV	04/05/99	0849	5.08	6.35
17	ZZZZZ	ZZZZZ	04/05/99	0947	5.07	6.34
18	ZZZZZ	ZZZZZ	04/05/99	1023	5.08	6.36
19	63664-1	63664-1	04/05/99	1058	5.07	6.34
20	63664-2	63664-2	04/05/99	1133	5.08	6.33
21	63664-2 MS	63664-2 MS	04/05/99	1208	5.08	6.35
22	63664-2 SD	63664-2 SD	04/05/99	1243	5.08	6.35
23	63664-3	63664-3	04/05/99	1318	5.07	6.34
24	ZZZZZ	ZZZZZ	04/05/99	1432		6.52
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = 2-Fluorophenol (+/- 0.20 MINUTES)
S2 = Phenol-d5 (+/- 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

GC Column: DB-5MS ID: 0.32 (mm) Init. Calib. Date(s): 03/22/99 03/22/99

Instrument ID: GCMS_E

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S3 : 7.53 S4 : 10.13

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S3 RT #	S4 RT #
01		50/100 CCV	03/22/99	0914	7.51	10.12
02		160/320	03/22/99	1048	7.53	10.13
03		120/240	03/22/99	1319	7.53	10.13
04		100/200	03/22/99	1356	7.53	10.13
05		20/40	03/22/99	1433	7.52	10.12
06		10/20	03/22/99	1509	7.51	10.11
07		SECOND SOURC	03/22/99	1546	7.53	10.12
08	ZZZZZ	ZZZZZ	03/22/99	1622	7.52	10.12
09	ZZZZZ	ZZZZZ	03/22/99	1659	7.52	10.12
10	ZZZZZ	ZZZZZ	03/22/99	1735	7.52	10.12
11	ZZZZZ	ZZZZZ	03/22/99	1812	7.54	10.13
12	ZZZZZ	ZZZZZ	03/22/99	1848	7.52	10.13
13	ZZZZZ	ZZZZZ	03/22/99	1924	7.52	10.12
14	ZZZZZ	ZZZZZ	03/22/99	2001	7.52	10.13
15	ZZZZZ	ZZZZZ	03/22/99	2037	7.53	10.12
16		50/100 CCV	04/05/99	0849	7.53	10.13
17	ZZZZZ	ZZZZZ	04/05/99	0947	7.52	10.13
18	ZZZZZ	ZZZZZ	04/05/99	1023	7.53	10.14
19	63664-1	63664-1	04/05/99	1058	7.52	10.13
20	63664-2	63664-2	04/05/99	1133	7.52	10.13
21	63664-2 MS	63664-2 MS	04/05/99	1208	7.54	10.13
22	63664-2 SD	63664-2 SD	04/05/99	1243	7.54	10.13
23	63664-3	63664-3	04/05/99	1318	7.53	10.13
24	ZZZZZ	ZZZZZ	04/05/99	1432	7.45	
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S3 = Nitrobenzene-d5 (+/- 0.20 MINUTES)
S4 = 2-Fluorobiphenyl (+/- 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

GC Column: DB-5MS ID: 0.32 (mm) Init. Calib. Date(s): 03/22/99 03/22/99

Instrument ID: GCMS_E

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S5 : 12.40 S6 : 15.71

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S5 RT #	S6 RT #
01		50/100 CCV	03/22/99	0914	12.39	15.70
02		160/320	03/22/99	1048	12.40	15.71
03		120/240	03/22/99	1319	12.39	15.71
04		100/200	03/22/99	1356	12.39	15.70
05		20/40	03/22/99	1433	12.38	15.69
06		10/20	03/22/99	1509	12.37	15.69
07		SECOND SOURC	03/22/99	1546	12.39	15.70
08	ZZZZZ	ZZZZZ	03/22/99	1622	12.38	15.70
09	ZZZZZ	ZZZZZ	03/22/99	1659	12.39	15.70
10	ZZZZZ	ZZZZZ	03/22/99	1735	12.39	15.70
11	ZZZZZ	ZZZZZ	03/22/99	1812	12.39	15.71
12	ZZZZZ	ZZZZZ	03/22/99	1848	12.39	15.71
13	ZZZZZ	ZZZZZ	03/22/99	1924	12.40	15.70
14	ZZZZZ	ZZZZZ	03/22/99	2001	12.40	15.72
15	ZZZZZ	ZZZZZ	03/22/99	2037	12.40	15.70
16		50/100 CCV	04/05/99	0849	12.41	15.72
17	ZZZZZ	ZZZZZ	04/05/99	0947	12.41	15.73
18	ZZZZZ	ZZZZZ	04/05/99	1023	12.42	15.73
19	63664-1	63664-1	04/05/99	1058	12.41	15.73
20	63664-2	63664-2	04/05/99	1133	12.40	15.73
21	63664-2 MS	63664-2 MS	04/05/99	1208	12.42	15.73
22	63664-2 SD	63664-2 SD	04/05/99	1243	12.42	15.73
23	63664-3	63664-3	04/05/99	1318	12.41	15.73
24	ZZZZZ	ZZZZZ	04/05/99	1432		
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S5 = 2,4,6-Tribromophenol (+/- 0.20 MINUTES)
S6 = Terphenyl-d14 (+/- 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: QUANTERRA ALASKA Contract:

Lab Code: Case No.: SAS No.: SDG No.: 664

GC Column: ID: 2.00 (mm) Init. Calib. Date(s):

Instrument ID: GCMS_E

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01			03/22/99	0852		
02			04/05/99	0717		
03						
04						
05						
06						
07						
08						
09						
10						
11						
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QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

SAMPLE INFORMATION SUMMARY

BATCH: /GCMS_E.i/032299E.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
03229E01.D	22-MAR-1999 08:52	DFTPP	1.00	GCMS_E	GCMTUNE.M	032299E.B
03229E02.D	22-MAR-1999 09:14	Cal Level 4	1.00	GCMS_E	AK8270C.M	032299E.B
03229E03.D	22-MAR-1999 10:48	Cal Level 1	1.00	GCMS_E	AK8270C.M	032299E.B
03229E04.D	22-MAR-1999 13:19	Cal Level 2	1.00	GCMS_E	AK8270C.M	032299E.B
03229E05.D	22-MAR-1999 13:56	Cal Level 3	1.00	GCMS_E	AK8270C.M	032299E.B
03229E06.D	22-MAR-1999 14:33	Cal Level 5	1.00	GCMS_E	AK8270C.M	032299E.B
03229E07.D	22-MAR-1999 15:09	Cal Level 6	1.00	GCMS_E	AK8270C.M	032299E.B
03229E08.D	22-MAR-1999 15:46	METHSPIKE	1.00	GCMS_E	AK8270C.M	032299E.B
03229E09.D	22-MAR-1999 16:22	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B
03229E10.D	22-MAR-1999 16:59	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B
03229E11.D	22-MAR-1999 17:35	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B
03229E12.D	22-MAR-1999 18:12	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B
03229E13.D	22-MAR-1999 18:48	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B
03229E14.D	22-MAR-1999 19:24	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
03229E01.D	GAS	SV		032299e		032299e
03229E02.D	LIQUID	SV	50/100 ccv	032299e		032299e
03229E03.D	LIQUID	SV	160/320	031099e		031099e
03229E04.D	LIQUID	SV	120/240	031099e		031099e
03229E05.D	LIQUID	SV	100/200	031099e		031099e
03229E06.D	LIQUID	SV	20/40	031099e		031099e
03229E07.D	LIQUID	SV	10/20	031099e		031099e
03229E08.D	LIQUID	SV	second source	031099e		031099e
03229E09.D	LIQUID	SV	tclp mb 3/19	031099e		031099e
03229E10.D	LIQUID	SV	tclp lcs 3/19	031099e		031099e
03229E11.D	LIQUID	SV	63633-2	031099e		031099e
03229E12.D	LIQUID	SV	63633-2 ms	031099e		031099e
03229E13.D	LIQUID	SV	63633-2 sd	031099e		031099e
03229E14.D	LIQUID	SV	63633-4	031099e		031099e

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
03229E01.D	all.sub		3570	3598	367179	3596
03229E02.D	TCl.sub	tclplcs.spk	3573	3571	3587	3579
03229E03.D	TCl.sub	tclplcs.spk	3582	3571	3587	3579
03229E04.D	TCl.sub	tclplcs.spk	3586	3571	3587	3579
03229E05.D	TCl.sub	tclplcs.spk	3588	3571	3587	3579
03229E06.D	TCl.sub	tclplcs.spk	3589	3571	3587	3579
03229E07.D	TCl.sub	tclplcs.spk	3591	3571	3587	3579
03229E08.D	TCl.sub	sec_source.spk	3594	3571	3587	3579
03229E09.D	tclp.sub	tclplcs.spk	3599	3598	3587	3579
03229E10.D	tclp.sub	tclplcs.spk	3600	3598	3587	3579
03229E11.D	tclp.sub	tclplcs.spk	3601	3598	3587	3579
03229E12.D	tclp.sub	tclplcs.spk	3602	3598	3587	3579
03229E13.D	tclp.sub	tclplcs.spk	3603	3598	3587	3579
03229E14.D	tclp.sub	tclplcs.spk	3604	3598	3587	3579

SAMPLE INFORMATION SUMMARY

BATCH: /GCMS_E.i/032299E.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
03229E15.D	22-MAR-1999 20:01	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B
03229E16.D	22-MAR-1999 20:37	Unknown	1.00	GCMS_E	AK8270C.M	032299E.B

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
03229E15.D	LIQUID	SV	63633-6	031099e		031099e
03229E16.D	LIQUID	SV	63633-10	031099e		031099e

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
03229E15.D	tclp.sub	tclplcs.spk	3605	3598	3587	3579
03229E16.D	tclp.sub	tclplcs.spk	3606	3598	3587	3579

SAMPLE INFORMATION SUMMARY

BATCH: /GCMS_E.i/040599E.B

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
04059E09.D	05-APR-1999 07:17	DFTPP	1.00	GCMS_E	GCMTUNE.M	040599E.B
04059E10.D	05-APR-1999 08:49	Continuing Cal	1.00	GCMS_E	AK8270C.M	040599E.B
04059E11.D	05-APR-1999 09:47	BLANK	1.00	GCMS_E	AK8270C.M	040599E.B
04059E12.D	05-APR-1999 10:23	LCS	1.00	GCMS_E	AK8270C.M	040599E.B
04059E13.D	05-APR-1999 10:58	Unknown	1.00	GCMS_E	AK8270C.M	040599E.B
04059E14.D	05-APR-1999 11:33	Unknown	1.00	GCMS_E	AK8270C.M	040599E.B
04059E15.D	05-APR-1999 12:08	MS	1.00	GCMS_E	AK8270C.M	040599E.B
04059E16.D	05-APR-1999 12:43	MSD	1.00	GCMS_E	AK8270C.M	040599E.B
04059E17.D	05-APR-1999 13:18	Unknown	1.00	GCMS_E	AK8270C.M	040599E.B
04059E18.D	05-APR-1999 14:32	Unknown	1.00	GCMS_E	AK8270C.M	040599E.B

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
04059E09.D	GAS	SV		040599e		040599e
04059E10.D	LIQUID	SV	50/100 ccv	040599e		040599e
04059E11.D	LIQUID	SV	blank	040599e	aq-mb 4/1	040599e
04059E12.D	LIQUID	SV	lcs	040599e	aq-lcs 4/1	040599e
04059E13.D	LIQUID	SV	63664-1	040599e	63664-1	040599e
04059E14.D	LIQUID	SV	63664-2	040599e	63664-2	040599e
04059E15.D	LIQUID	SV	63664-2 ms	040599e	63664-2 ms	040599e
04059E16.D	LIQUID	SV	63664-2 sd	040599e	63664-2 sd	040599e
04059E17.D	LIQUID	SV	63664-3	040599e	63664-3	040599e
04059E18.D	LIQUID	SV	skp chk	040599e		040599e

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
04059E09.D	all.sub		3704	3718	367179	3716
04059E10.D	TCl.sub	soilTCL.spk	3707	3705	3587	3706
04059E11.D	TCl.sub	soilTCL.spk	3708	3705	3587	3706
04059E12.D	TCl.sub	625lcs.spk	3709	3705	3587	3706
04059E13.D	TCl.sub	soilTCL.spk	3710	3705	3587	3706
04059E14.D	TCl.sub	soilTCL.spk	3711	3705	3587	3706
04059E15.D	TCl.sub	soilTCL.spk	3712	3705	3587	3706
04059E16.D	TCl.sub	soilTCL.spk	3713	3705	3587	3706
04059E17.D	TCl.sub	soilTCL.spk	3714	3705	3587	3706
04059E18.D	TCl.sub	soilTCL.spk	3715	3705	3587	3706

EXTRACTION LOGS

Semivolatile Fuels Extraction Log

SOP#: ANC-GC-0001

Date: 3-30-99

Solvent: Dichloromethane

Mfg./Lot: Fisher 987108

Surrogate (AK102): P-348-32-4B (1)

Surrogate (AK103): (2)

Sodium Sulfate: Fisher 985183

Method: (AK102) (AK103)

Matrix: Soil (Water) Waste

Technique: (Sep) CLLE Sonc

Chemist: LA

Witness(*): —

Spike ID: AK481-17-2 / AK481-12-2

Sulfuric Acid:

Sample ID	Amount Extracted	Surrogate amount(1)	*	Surrogate amount(2)	*	Amount Spiked	*	Final Volume	Comments
MB	1000	1ml						1ml	
LCS	1000					1ml / 1ml			
DCS	1000					1ml / 1ml			
3664-1	1045								
-2	1040								
-2MS	1035					1ml / 1ml			~~had a yellow color~~ LA 3-30-99
-2SD	1015					1ml / 1ml			
-3	1035	↓						↓	

LA 3-30-99

000142

Semivolatile BNA Extraction Log

SOP#: 8270 = CORP-OP-0001
625 =ANC-MS-0001 (water only)
PAH: SLP 9.40a/ANC-MS-0003

Method: (8270) PAH 625
Matrix: Soil (Water) Waste TCLP
Technique: (Sep) CLLE Sonc

Date: 3-30-99
Chemist: LA
Solvent: $MeCl_2$
Spike ID: P 348-31-3
Mfg./Lot: Fisher 987108
Sodium Hydroxide: AR 461-49-2
Surrogate: AK 348-30-1
Sulfuric Acid: AR 461-47-1
Sodium Sulfate: Fisher

Sample ID	Amount Extracted	Surrogate amount	*	Amount Spiked	*	Final Volume	pH1	pH2	Comments
MB	1000	1ml				1ml			
LCS	1000			1ml					
63664-1	975								
-2	970								
-2MS	980			1ml					Had a yellow color
-2SD	995			1ml					
-3	1045								

3-30-99

Semivolatile BNA Extraction Log

SOP#: 8270 = CORP-OP-0001 Rerun
625 =ANC-MS-0001 (water only)
PAH: SLP 9.40a/ANC-MS-0003

Method: ~~8270~~ PAH 625
Matrix: Soil (Water) Waste TCLP
Technique: (Sep) CLLE Sonc

Date: 4-1-99
Chemist: LA
Solvent: $MeCl_2$
Spike ID: P348-35-3B
Mfg./Lot: Fisher 987108
Sodium Hydroxide: ____
Surrogate: AK348-30-1
Sulfuric Acid: ____
Sodium Sulfate: Fisher 985183

Sample ID	Amount Extracted	Surrogate amount	*	Amount Spiked	*	Final Volume	pH1	pH2	Comments
MB	1000	1ml		—		1ml			
LCS	1000			1ml					
63664-1	975			—					
-2	970			—					
-2MS	1040			1ml					
-2SD	1020			1ml					
-3	1040	↓		—		↓	↓	↓	

TH 4-1-99

000144

METHOD

AK101

RAW DATA

QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319903.d
Lab Smp Id: AK101 LCS Client Smp ID: AK101 LCS
Inj Date : 31-MAR-1999 11:30
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : AK101 LCS
Misc Info : AK474-39, 24, 17, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.750	13.743	0.007	472557	46.7510	46.751
S	2 GRO	9.780-19.830			5540912	891.736	891.735
	3 1-Chloro-4-Fluorobenzene	17.130	17.130	0.000	415188	38.4838	38.483
$	4 Bromofluorobenzene	18.717	18.720	-0.003	370015	45.3115	45.311

QUANTERRA

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: AK101 LCS
Level: MED
Data Type: GC DATA
SpikeList File: grolcs.spk
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, 17, AK430-91

Client SDG: 063664
Fraction: VOA
Client Smp ID: AK101 LCS
Operator: JLB
SampleType: LCS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
S 2 GRO	1000.000	891.735	89.17	60-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	46.751	93.50	60-120
$ 4 Bromofluorobenzene	50.000	45.311	90.62	60-120

Data : /GCVOA_N.i/033199N-1.b/03319903.d

Date : 31-MAR-1999 11:30

Client ID: AK101 LCS

Sample Info: AK101 LCS

Column phase:

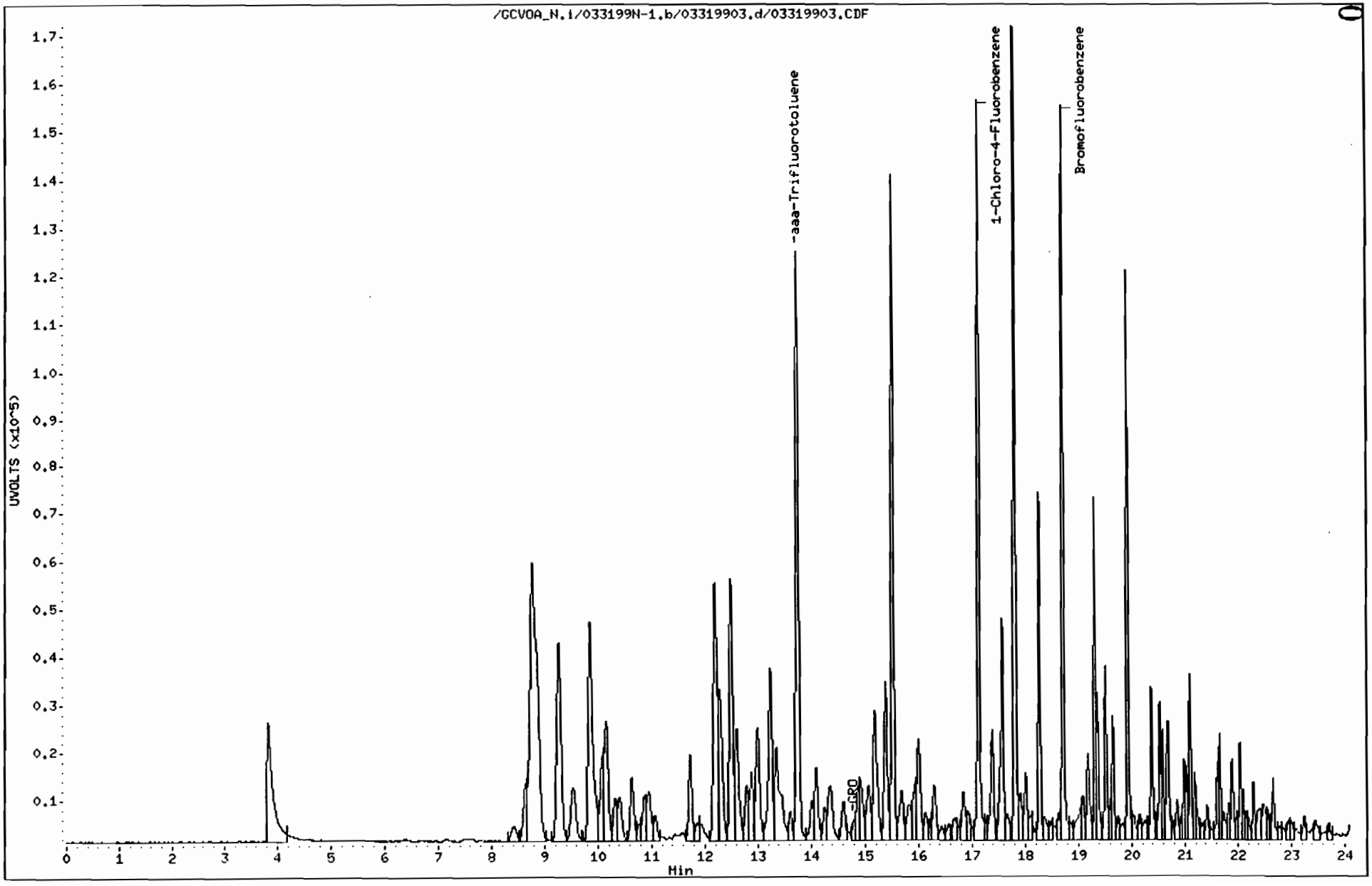
Instrument: GCVOA_N.i

Operator: JLB

Column diameter: 2.00

Page

000147



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319904.d
Lab Smp Id: AK101 DCS Client Smp ID: AK101 DCS
Inj Date : 31-MAR-1999 12:04
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : AK101 DCS
Misc Info : AK474-39, 24, 17, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.743	13.743	0.000	476487	47.1398	47.139
S	2 GRO	9.780-19.830			5757855	926.650	926.649
	3 1-Chloro-4-Fluorobenzene	17.127	17.130	-0.003	422307	39.1436	39.143
$	4 Bromofluorobenzene	18.713	18.720	-0.007	368836	45.1672	45.167

QUANTERRA

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: AK101 DCS
Level: MED
Data Type: GC DATA
SpikeList File: grolcs.spk
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, 17, AK430-91

Client SDG: 063664
Fraction: VOA
Client Smp ID: AK101 DCS
Operator: JLB
SampleType: LCSD
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
S 2 GRO	1000.000	926.649	92.66	60-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	47.139	94.28	60-120
$ 4 Bromofluorobenzene	50.000	45.167	90.33	60-120

Data . .e: /GCVOA_N.i/033199N-1.b/03319904.d

Page 3

Date : 31-MAR-1999 12:04

Client ID: AK101 DCS

Instrument: GCVOA_N.i

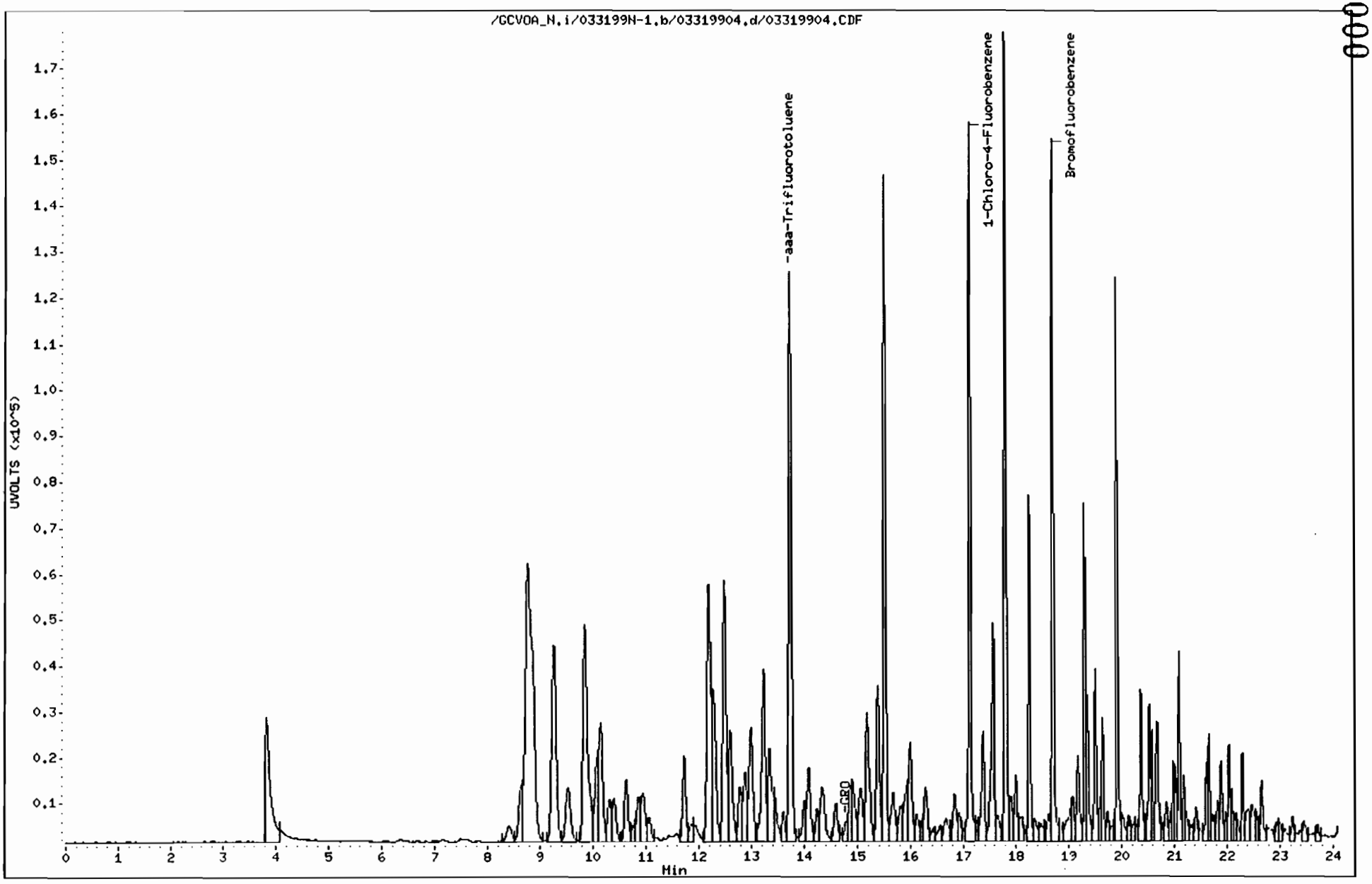
Sample Info: AK101 DCS

Operator: JLB

Column phase:

Column diameter: 2.00

000150



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319905.d
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 31-MAR-1999 12:38
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : BLANK
Misc Info : AK474-39, 24, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.743	13.743	0.000	435999	43.1343	43.134
S	2 GRO	9.780	19.830		24582	3.95614	3.956
	3 1-Chloro-4-Fluorobenzene	17.127	17.130	-0.003	370813	34.3706	34.370
$	4 Bromofluorobenzene	18.710	18.720	-0.010	339071	41.5222	41.522

QUANTERRA

RECOVERY REPORT

Client Name: Client SDG: 063664
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: BLANK Client Smp ID: BLANK
Level: MED Operator: JLB
Data Type: GC DATA SampleType: BLANK
SpikeList File: grolcs.spk Quant Type: ESTD
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, AK430-91

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	43.134	86.27	60-120
$ 4 Bromofluorobenzene	50.000	41.522	83.04	60-120

Data : /GCVOA_N.i/033199N-1.b/03319905.d

Date : 31-MAR-1999 12:38

Client ID: BLANK

Sample Info: BLANK

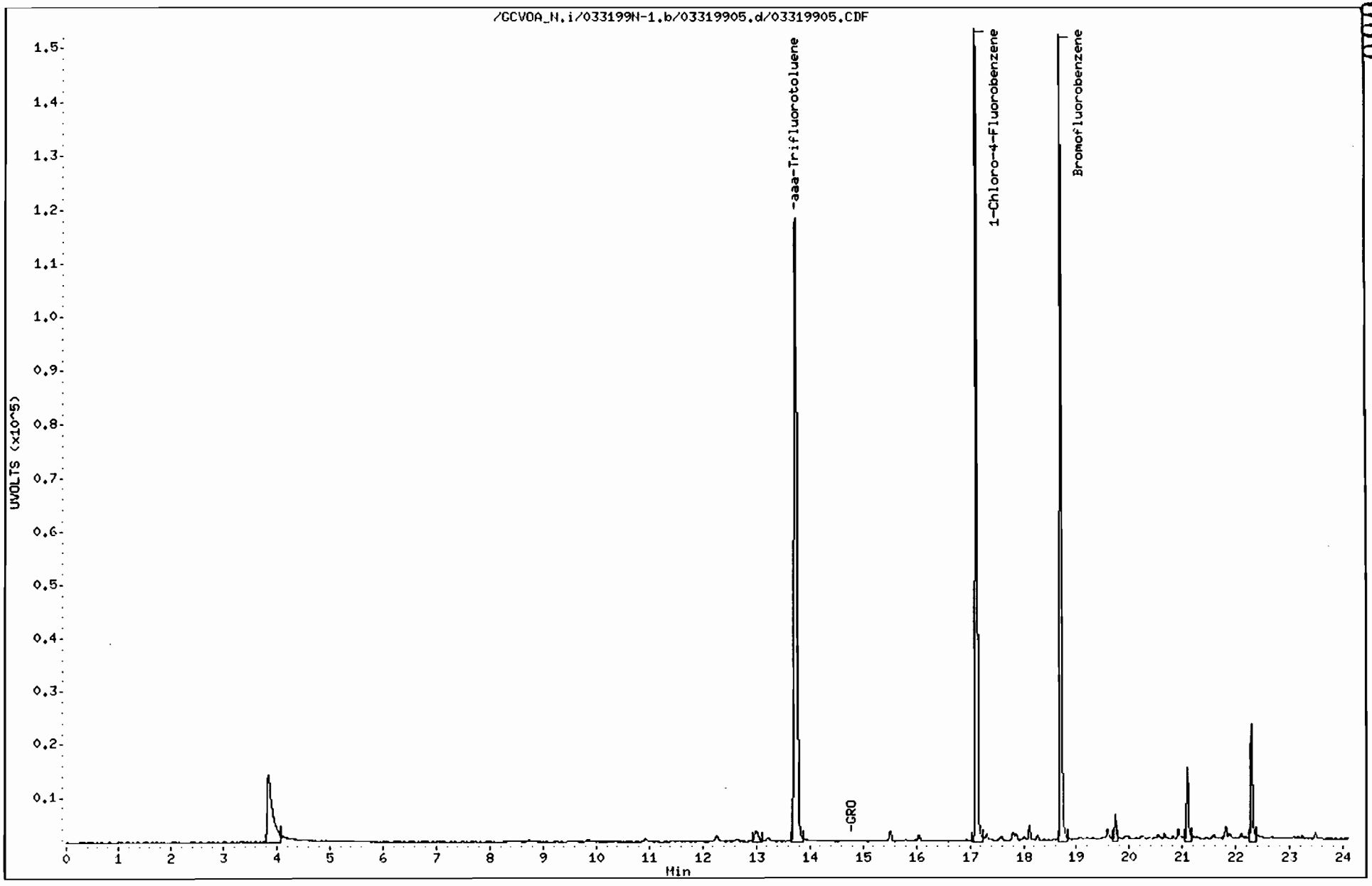
Column phase:

Instrument: GCVOA_N.i

Operator: JLB

Column diameter: 2.00

000153



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319906.d
Lab Smp Id: 063644-2 Client Smp ID: 063664-2
Inj Date : 31-MAR-1999 15:01
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : 063664-2
Misc Info : AK474-39, 24, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.733	13.743	-0.010	448846	44.4052	44.405
S	2 GRO	9.780-19.830			11473	1.84643	1.846
	3 1-Chloro-4-Fluorobenzene	17.120	17.130	-0.010	369083	34.2103	34.210
$	4 Bromofluorobenzene	18.710	18.720	-0.010	341776	41.8534	41.853

QUANTERRA

RECOVERY REPORT

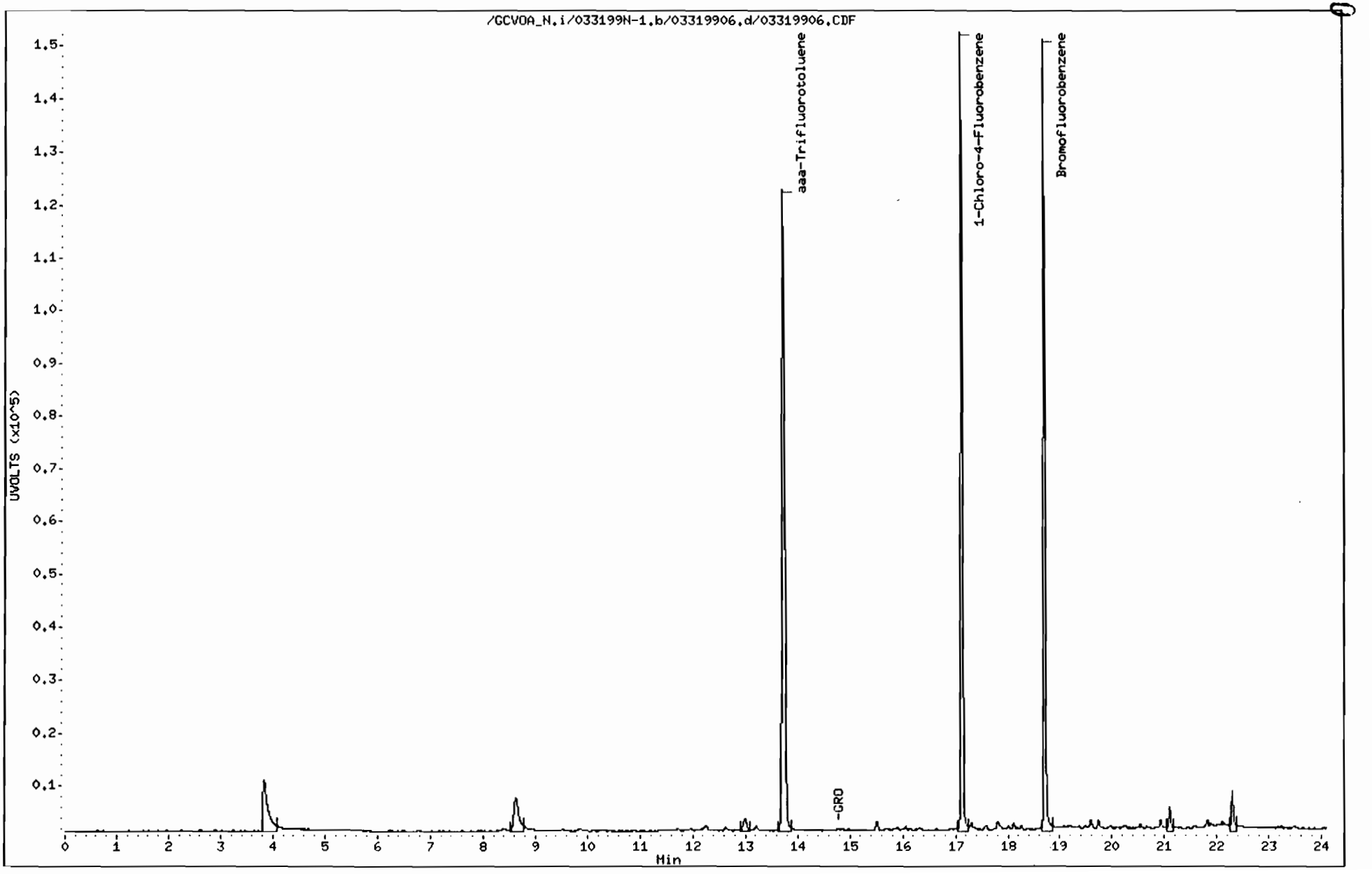
Client Name: Client SDG: 063644
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: 063644-2 Client Smp ID: 063664-2
Level: MED Operator: JLB
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: grolcs.spk Quant Type: ESTD
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, AK430-91

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	44.405	88.81	60-120
$ 4 Bromofluorobenzene	50.000	41.853	83.71	60-120

Data File: /GCVOA_N.i/033199N-1.b/03319906.d
Date : 31-MAR-1999 15:01
Client ID: 063664-2
Sample Info: 063664-2

Instrument: GCVOA_N.i
Operator: JLB
Column diameter: 2.00

Column phase:



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319907.d
Lab Smp Id: 063644-2 MS Client Smp ID: 063664-2 MS
Inj Date : 31-MAR-1999 15:36
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : 063664-2 MS
Misc Info : AK474-39, 24, 17, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 01-Apr-1999 12:07 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
S	1 aaa-Trifluorotoluene	13.740	13.743	-0.003	477149	47.2053	47.205
S	2 GRO	9.780-19.830			5465889	879.662	879.661
	3 1-Chloro-4-Fluorobenzene	17.123	17.130	-0.007	411903	38.1793	38.179
S	4 Bromofluorobenzene	18.713	18.720	-0.007	371631	45.5094	45.509

QUANTERRA

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 063644-2 MS
Level: MED
Data Type: GC DATA
SpikeList File: grolcs.spk
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, 17, AK430-91

Client SDG: 063644
Fraction: VOA
Client Smp ID: 063664-2 MS
Operator: JLB
SampleType: MS
Quant Type: ESTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
S 2 GRO	1000.000	879.661	87.97	60-120

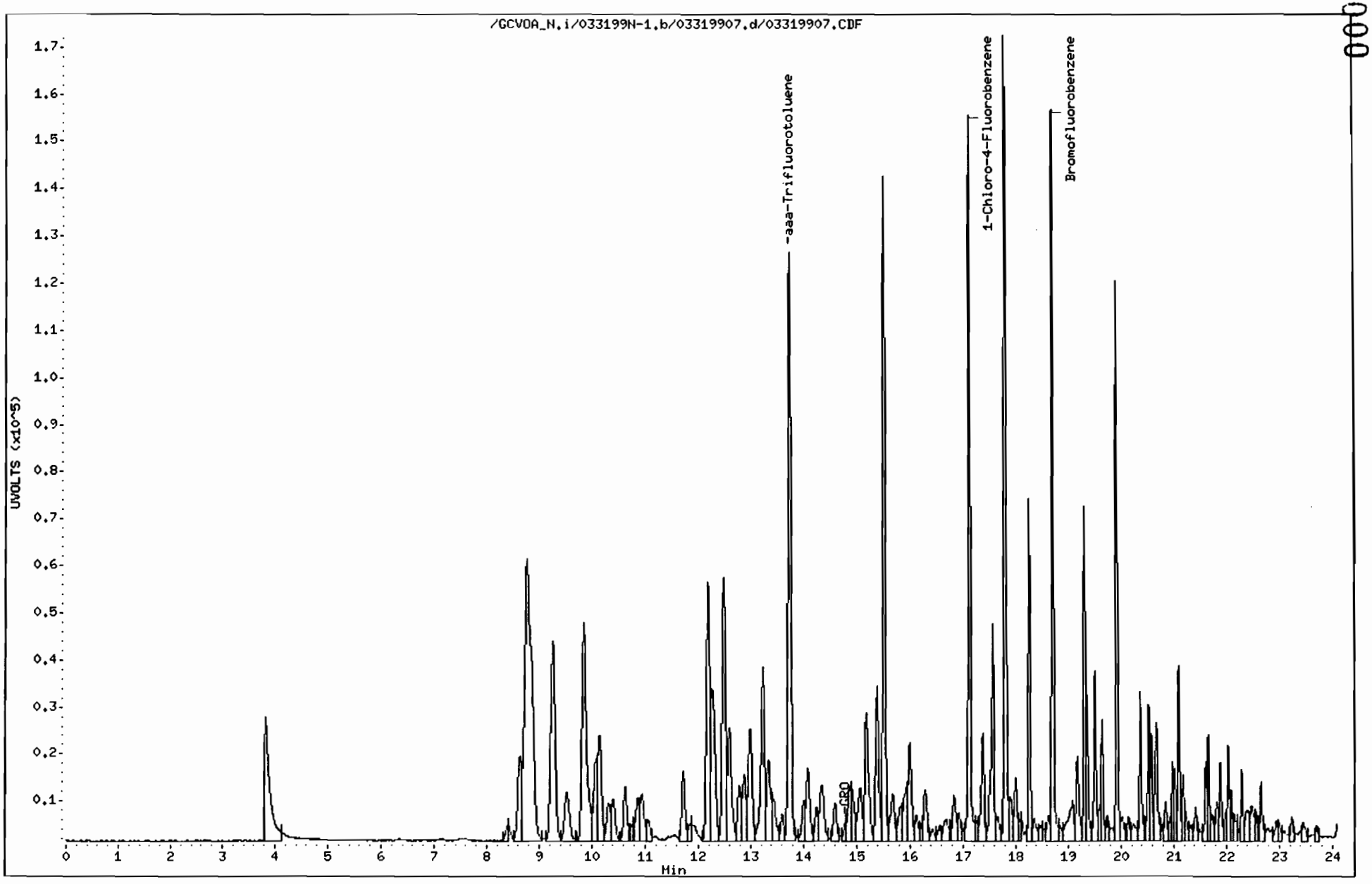
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	47.205	94.41	60-120
$ 4 Bromofluorobenzene	50.000	45.509	91.02	60-120

Data File: /GCVOA_N.i/033199N-1.b/03319907.d
Date : 31-MAR-1999 15:36
Client ID: 063664-2 MS
Sample Info: 063664-2 MS

Instrument: GCVOA_N.i
Operator: JLB
Column diameter: 2.00

Column phase:

000159



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319908.d
Lab Smp Id: 063644-2 MSD Client Smp ID: 063664-2 MSD
Inj Date : 31-MAR-1999 16:10
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : 063664-2 MSD
Misc Info : AK474-39, 24, 17, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 01-Apr-1999 12:07 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
S	1 aaa-Trifluorotoluene	13.737	13.743	-0.006	475048	46.9974	46.997
S	2 GRO	9.780-19.830			5522331	888.745	888.745
	3 1-Chloro-4-Fluorobenzene	17.123	17.130	-0.007	411048	38.1000	38.100
S	4 Bromofluorobenzene	18.710	18.720	-0.010	374459	45.8557	45.855

QUANTERRA

RECOVERY REPORT

Client Name: Client SDG: 063644
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: 063644-2 MSD Client Smp ID: 063664-2 MSD
Level: MED Operator: JLB
Data Type: GC DATA SampleType: MSD
SpikeList File: grolcs.spk Quant Type: ESTD
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, 17, AK430-91

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
S 2 GRO	1000.000	888.745	88.87	60-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	46.997	93.99	60-120
$ 4 Bromofluorobenzene	50.000	45.855	91.71	60-120

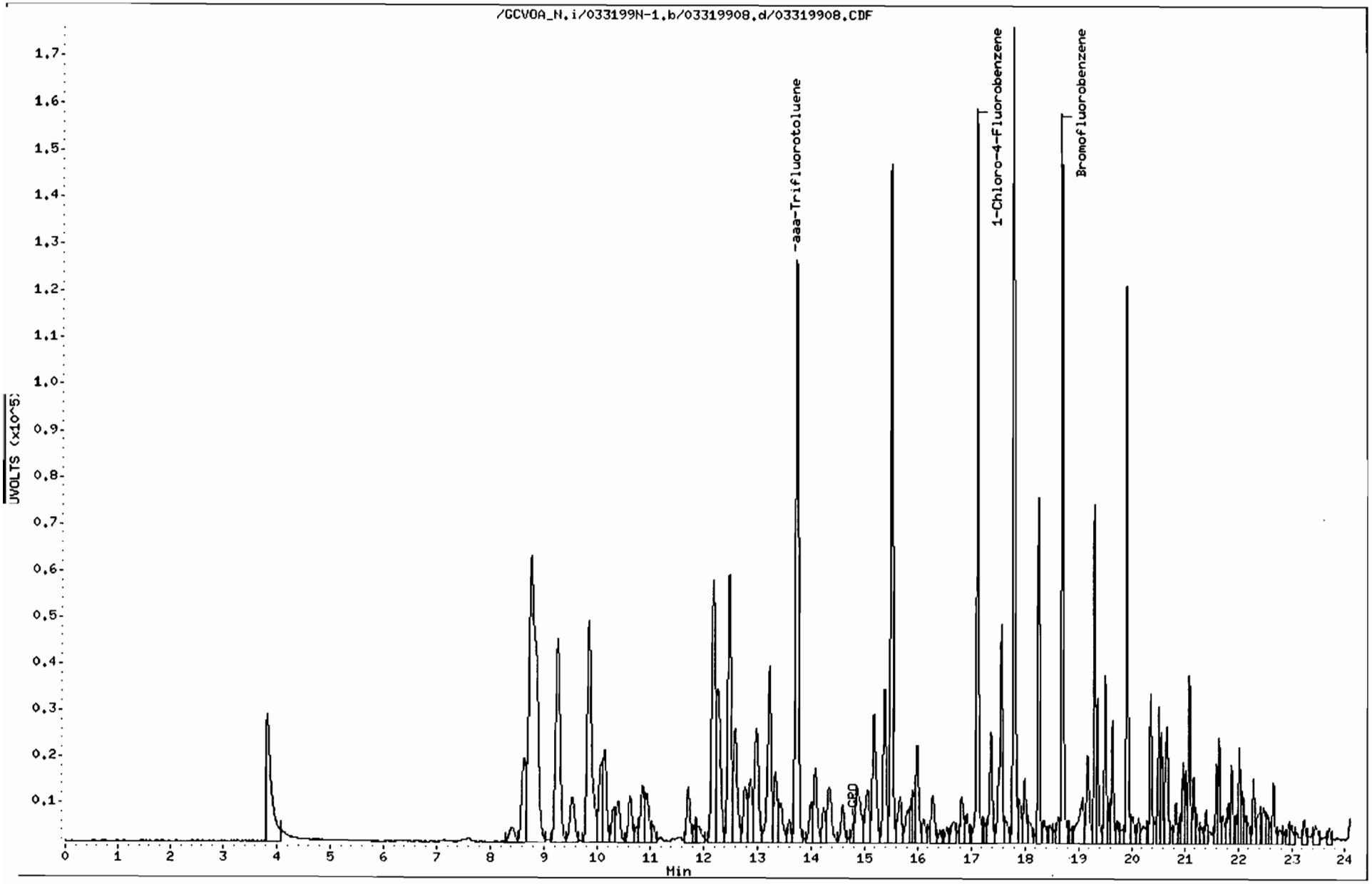
Data File: /GCVOA_N.i/033199N-1.b/03319908.d
Date : 31-MAR-1999 16:10
Client ID: 063664-2 MSD
Sample Info: 063664-2 MSD

Column phase:

Instrument: GCVOA_N.i

Operator: JLB
Column diameter: 2.00

000162



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319909.d
Lab Smp Id: 063644-1 Client Smp ID: 063664-1
Inj Date : 31-MAR-1999 16:44
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : 063664-1
Misc Info : AK474-39, 24, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
S	1 aaa-Trifluorotoluene	13.740	13.743	-0.003	439644	43.4949	43.494
S	2 GRO	9.780-19.830			43919	7.06818	7.068
	3 1-Chloro-4-Fluorobenzene	17.123	17.130	-0.007	368205	34.1289	34.128
S	4 Bromofluorobenzene	18.710	18.720	-0.010	332156	40.6754	40.675

QUANTERRA

RECOVERY REPORT

Client Name: Client SDG: 063644
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: 063644-1 Client Smp ID: 063664-1
Level: MED Operator: JLB
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: grolcs.spk Quant Type: ESTD
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, AK430-91

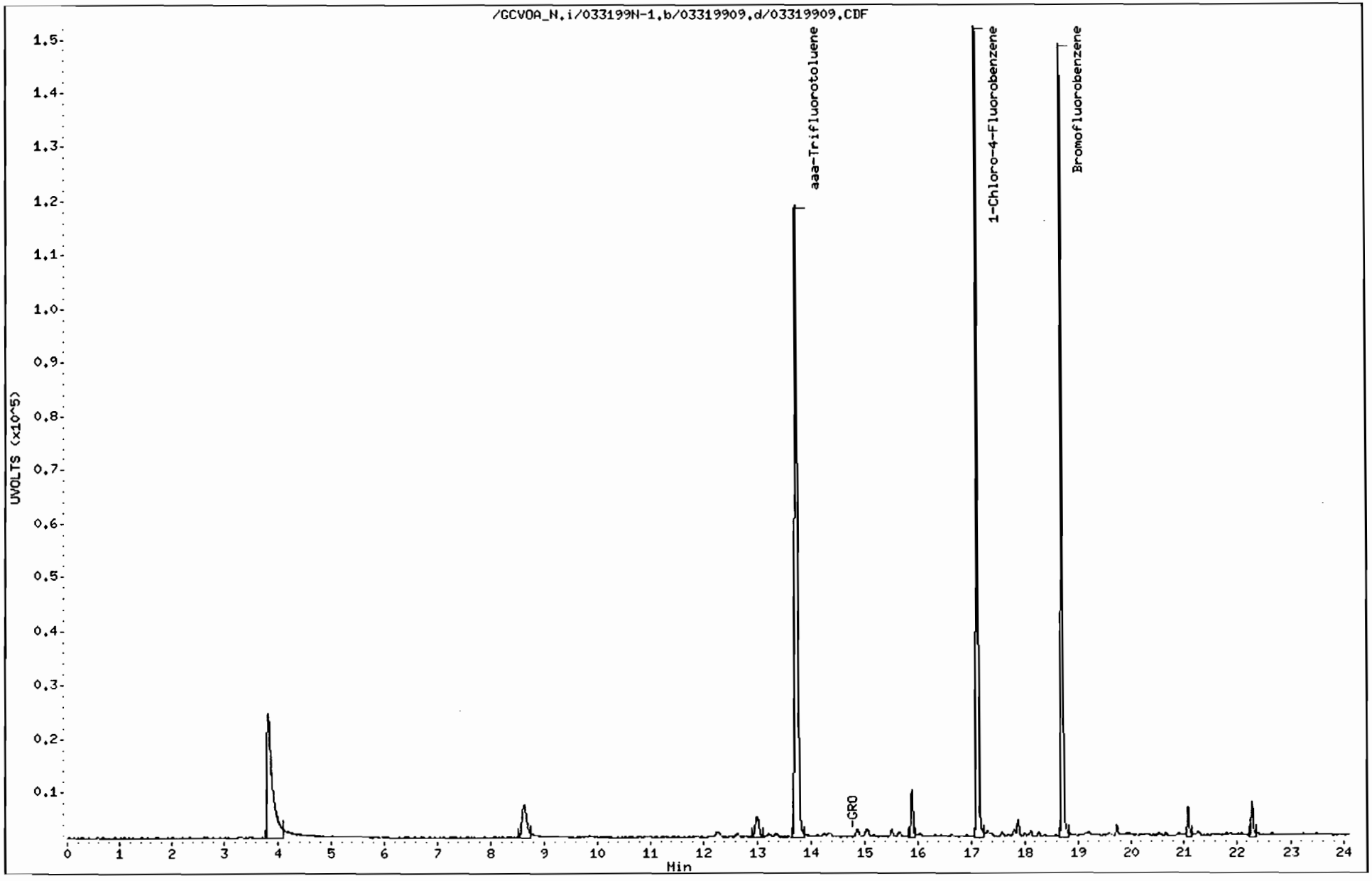
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	43.494	86.99	60-120
$ 4 Bromofluorobenzene	50.000	40.675	81.35	60-120

Data File: /GCVOA_N.i/033199N-1.b/03319909.d
Date : 31-MAR-1999 16:44
Client ID: 063664-1
Sample Info: 063664-1

Instrument: GCVOA_N.i
Operator: JLB
Column diameter: 2.00

Column phase:

000165



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319910.d
Lab Smp Id: 063644-3 Client Smp ID: 063664-3
Inj Date : 31-MAR-1999 17:18
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : 063664-3
Misc Info : AK474-39, 24, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.737	13.743	-0.006	445935	44.1172	44.117
S	2 GRO	9.780-19.830			15371	2.47376	2.473
	3 1-Chloro-4-Fluorobenzene	17.123	17.130	-0.007	369455	34.2448	34.244
$	4 Bromofluorobenzene	18.710	18.720	-0.010	342474	41.9389	41.938

QUANTERRA

RECOVERY REPORT

Client Name: Client SDG: 063644
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: 063644-3 Client Smp ID: 063664-3
Level: MED Operator: JLB
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: grolcs.spk Quant Type: ESTD
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, AK430-91

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	44.117	88.23	60-120
$ 4 Bromofluorobenzene	50.000	41.938	83.88	60-120

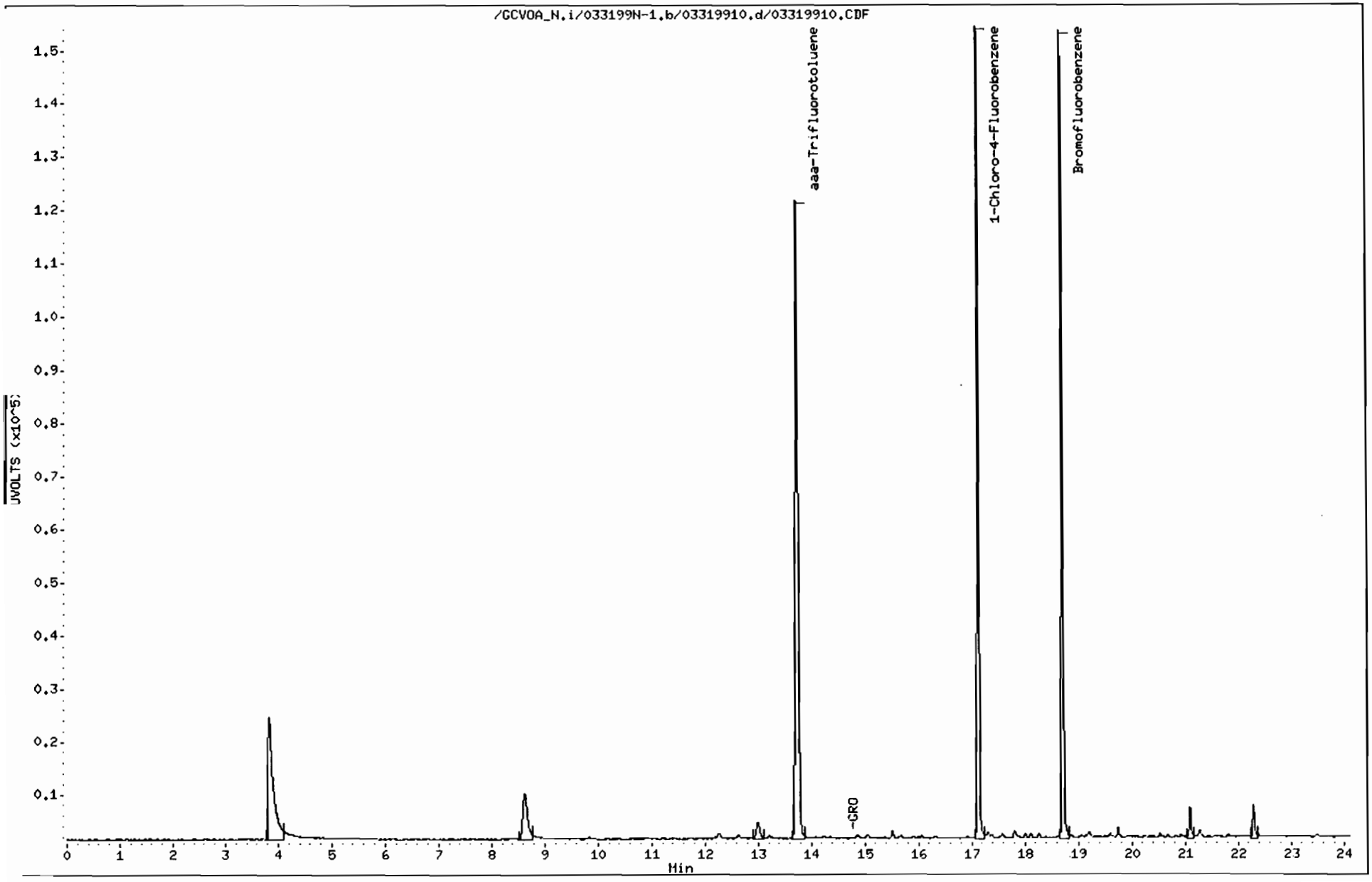
000165

Data File: /GCVOA_N.i/033199N-1.b/03319910.d
Date : 31-MAR-1999 17:18
Client ID: 063664-3
Sample Info: 063664-3

Instrument: GCVOA_N.i

Operator: JLB
Column diameter: 2.00

Column phase:



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319911.d
Lab Smp Id: 063644-4 Client Smp ID: 063664-4
Inj Date : 31-MAR-1999 17:52
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : 063664-4
Misc Info : AK474-24, 39, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.740	13.743	-0.003	445774	44.1013	44.101
S	2 GRO	9.780-19.830			10841	1.74471	1.744
	3 1-Chloro-4-Fluorobenzene	17.127	17.130	-0.003	367215	34.0371	34.037
$	4 Bromofluorobenzene	18.713	18.720	-0.007	338533	41.4563	41.456

QUANTERRA

RECOVERY REPORT

Client Name: Client SDG: 063644
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: 063644-4 Client Smp ID: 063664-4
Level: MED Operator: JLB
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: grolcs.spk Quant Type: ESTD
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-24, 39, AK430-91

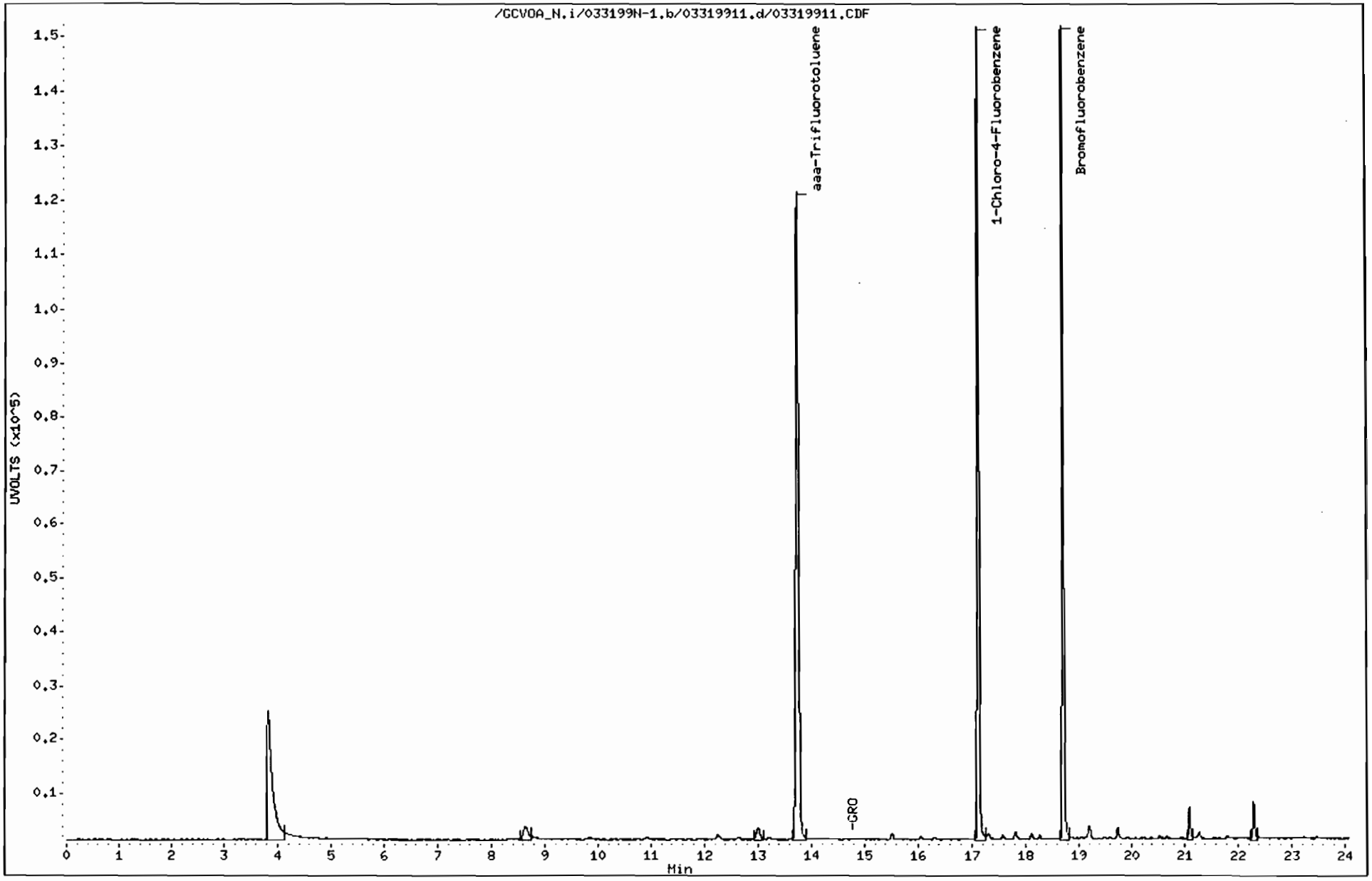
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	44.101	88.20	60-120
$ 4 Bromofluorobenzene	50.000	41.456	82.91	60-120

Data File: /GCVOA_N.i/033199N-1.b/03319911.d
Date : 31-MAR-1999 17:52
Client ID: 063664-4
Sample Info: 063664-4

Instrument: GCVOA_N.i
Operator: JLB
Column diameter: 2.00

Column phase:

0001171



QUANTERRA

Data file : \GCVOA_N.i\033199N-1.b\03319912.d
Lab Smp Id: BLANK Client Smp ID: BLANK
Inj Date : 31-MAR-1999 18:27
Operator : JLB Inst ID: GCVOA_N.i
Smp Info : BLANK
Misc Info : AK474-39, 24, AK430-91
Comment :
Method : \GCVOA_N.i\033199N-1.b\AK101_FID.m
Meth Date : 31-Mar-1999 14:37 BaileyJ Quant Type: ESTD
Cal Date : 07-AUG-1998 10:19 Cal File: 08078003.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: GRO.sub
Target Version: 3.40
Processing Host: ANCP1126

Concentration Formula: Amt * DF

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
$	1 aaa-Trifluorotoluene	13.743	13.743	0.000	435542	43.0890	43.089
S	2 GRO	9.780-19.830			10085	1.62305	1.623
	3 1-Chloro-4-Fluorobenzene	17.127	17.130	-0.003	367099	34.0264	34.026
$	4 Bromofluorobenzene	18.713	18.720	-0.007	335109	41.0370	41.037

QUANTERRA

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: BLANK
Level: MED
Data Type: GC DATA
SpikeList File: grolcs.spk
Sublist File: GRO.sub
Method File: \GCVOA_N.i\033199N-1.b\AK101_FID.m
Misc Info: AK474-39, 24, AK430-91

Client SDG: 063644
Fraction: VOA
Client Smp ID: BLANK
Operator: JLB
SampleType: SAMPLE
Quant Type: ESTD

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 aaa-Trifluorotolue	50.000	43.089	86.18	60-12
$ 4 Bromofluorobenzene	50.000	41.037	82.07	60-12

Dat: : /GCVOA_N.i/033199N-1.b/03319912.d

Pag

Date . 31-MAR-1999 18:27

Client ID: BLANK

Instrument: GCVOA_N.i

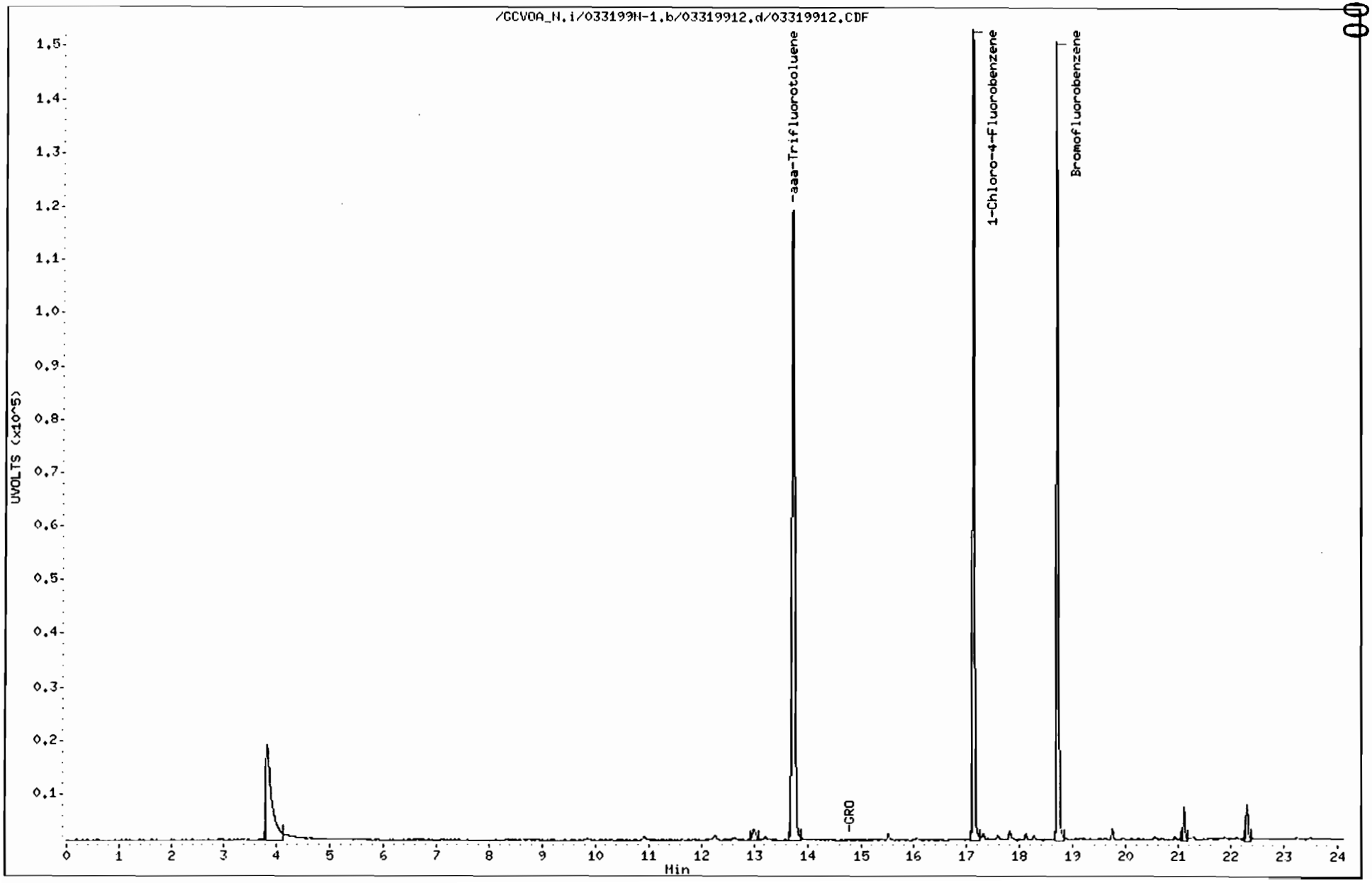
Sample Info: BLANK

Operator: JLB

Column phase:

Column diameter: 2.00

000174



METHOD

AK102/AK103

RAW DATA

Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B05.D
Lab Smp Id: aqmb 3/30 Client Smp ID: aqmb 3/30
Inj Date : 30-MAR-1999 14:18
Operator : TRA Inst ID: GCFID_B.i
Smp Info : aqmb 3/30
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 5 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)
S	1 DRO	3.320-14.340			399211	43.1661	~~43.1661(a)~~
S	4 o-Terphenyl	10.832	10.857	-0.025	1230728	81.5336	81.5336
S	5 n-Triacontane-d62	16.386	16.370	0.016	1066699	77.2002	77.2002
S	6 RRO	14.340-19.160			143031	20.1347	~~20.1347~~

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Quanterra Alaska

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: aqmb 3/30
Level: LOW
Data Type: GC DATA
SpikeList File: ak02_31cs.spk
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

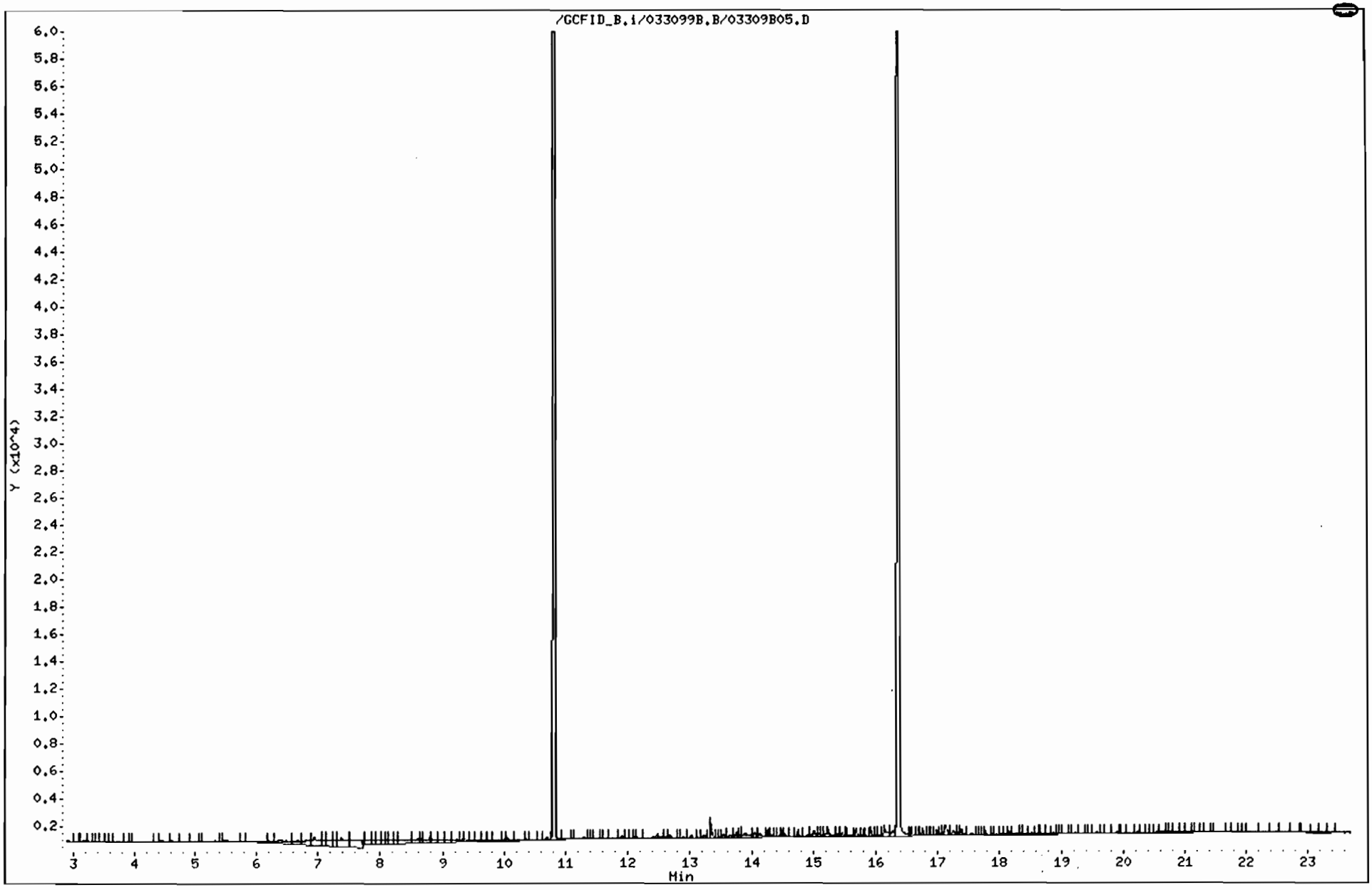
Client SDG: 664
Fraction: SV
Client Smp ID: aqmb 3/30
Operator: TRA
SampleType: BLANK
Quant Type: ESTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	81.5336	81.53	60-120
$ 5 n-Triacontane-d62	~~70.0000~~ 100	77.2002	~~110.29~~ 77	60-120

all Surrogate Corrected
3/31/99

Data File: /GCFID_B.i/033099B.B/03309B05.D
Date : 30-MAR-1999 14:18
Client ID: aqmb 3/30
Sample Info: aqmb 3/30
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B06.D
Lab Smp Id: aqlcs 3/30 Client Smp ID: aqlcs 3/30
Inj Date : 30-MAR-1999 14:48
Operator : TRA Inst ID: GCFID_B.i
Smp Info : aqlcs 3/30
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)
S	1 DRO	3.320-14.340			4456252	481.848	481.848
$	4 o-Terphenyl	10.829	10.857	-0.028	1207000	79.9617	79.9617
$	5 n-Triacontane-d62	16.386	16.370	0.016	1160701	84.0234	84.0234(R)
S	6 RRO	14.340-19.160			3142912	442.432	442.432

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Quanterra Alaska

RECOVERY REPORT

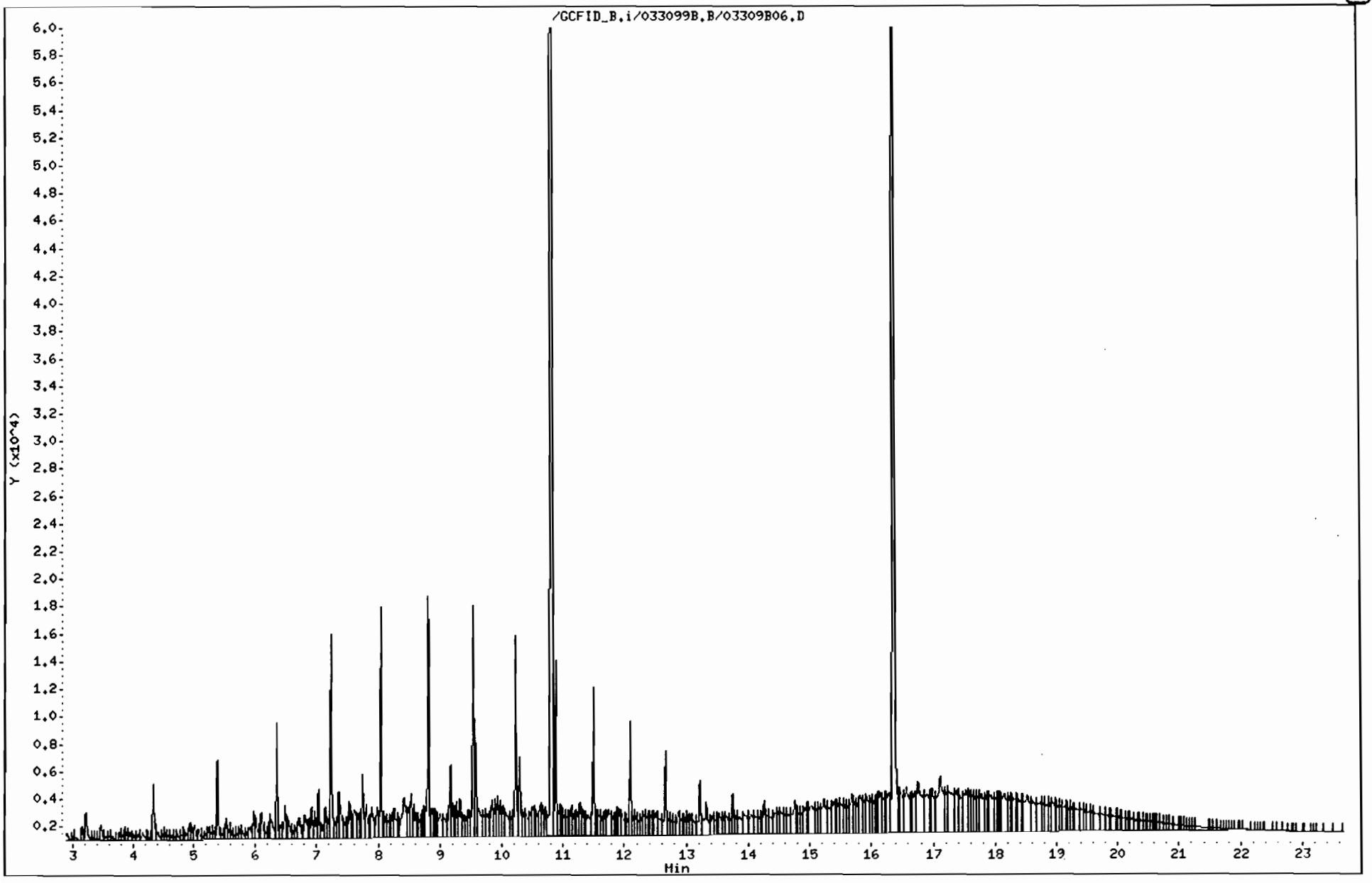
Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: aqlcs 3/30 Client Smp ID: aqlcs 3/30
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_3lcs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	79.9617	79.96	60-120
$ 5 n-Triacontane-d62	~~70.0000~~	84.0234	~~120.03*~~ 54%	60-120

Data rile: /GCFlD_B.i/033099B.B/03309B06.D
Date : 30-MAR-1999 14:48
Client ID: aqlcs 3/30
Sample Info: aqlcs 3/30
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32

000180



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B07.D
Lab Smp Id: aqdcs 3/30 Client Smp ID: aqdcs 3/30
Inj Date : 30-MAR-1999 15:47
Operator : TRA Inst ID: GCFID_B.i
Smp Info : aqdcs 3/30
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)
S	1 DRO	3.320-14.340			4404660	476.269	476.269
S	4 o-Terphenyl	10.828	10.857	-0.029	1213350	80.3824	80.3824
S	5 n-Triacontane-d62	16.385	16.370	0.015	1169629	84.6714	84.6714(R)
S	6 RRO	14.340-19.160			3116332	438.690	438.690

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Quanterra Alaska

RECOVERY REPORT

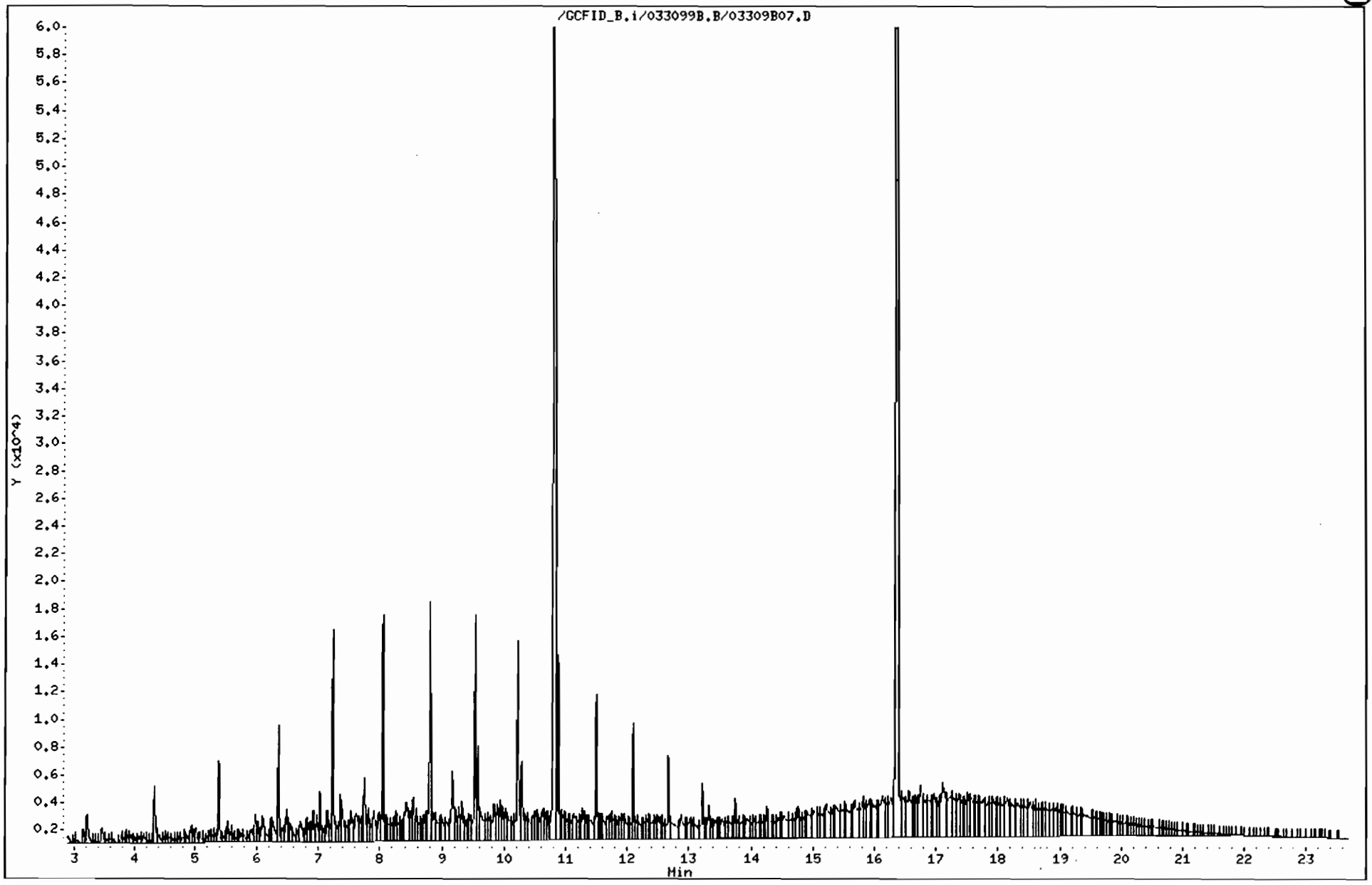
Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: aqdcs 3/30 Client Smp ID: aqdcs 3/30
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_3lcs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	80.3824	80.38	60-120
$ 5 n-Triacontane-d62	~~70.0000~~ 100	84.6714	~~120.96~~* ≤5	60-120

Data File: /GCFID_B.i/033099B.B/03309B07.D
Date : 30-MAR-1999 15:47
Client ID: aqdcs 3/30
Sample Info: aqdcs 3/30
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32

0000183



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B08.D
Lab Smp Id: 63664-1 Client Smp ID: 63664-1
Inj Date : 30-MAR-1999 16:17
Operator : TRA Inst ID: GCFID_B.i
Smp Info : 63664-1
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
S 1 DRO	3.320-14.340			114759	12.4087	~~12.4087(a)~~
S 4 o-Terphenyl	10.826	10.857	-0.031	1198148	79.3753	79.3752
S 5 n-Triacontane-d62	16.380	16.370	0.010	1075546	77.8424	77.8424
S 6 RRO	14.340-19.160			110846	15.6039	~~15.6039~~

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Quanterra Alaska

RECOVERY REPORT

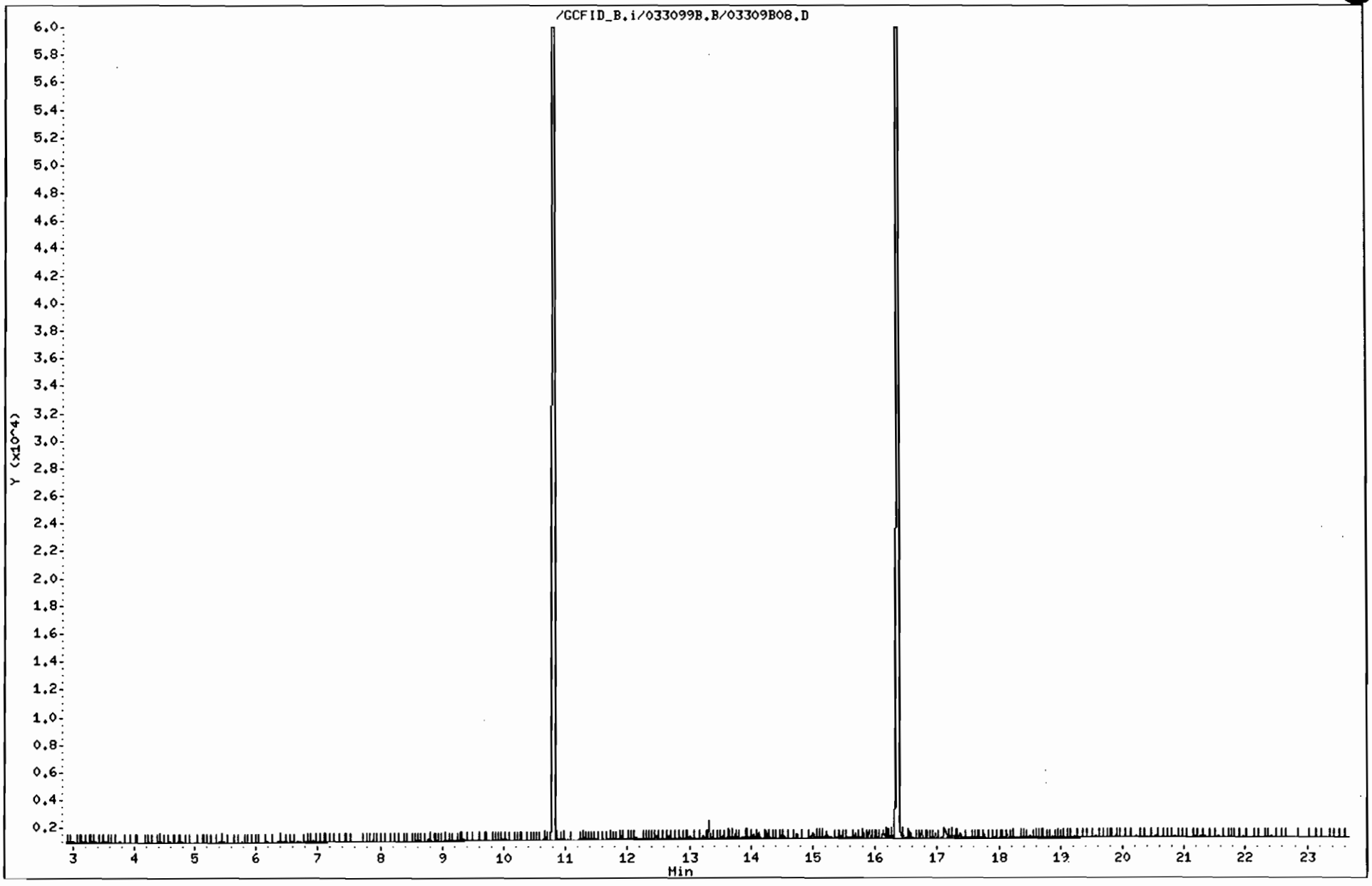
Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: 63664-1 Client Smp ID: 63664-1
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_3lcs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	79.3752	79.38	60-120
$ 5 n-Triacontane-d62	~~70.0000~~	77.8424	~~111.20~~ 75	60-120

Data ..le: /GCFID_B.i/033099B.B/03309B08.D
Date : 30-MAR-1999 16:17
Client ID: 63664-1
Sample Info: 63664-1
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32

0001866



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B09.D
Lab Smp Id: 63664-2 Client Smp ID: 63664-2
Inj Date : 30-MAR-1999 16:47
Operator : TRA Inst ID: GCFID_B.i
Smp Info : 63664-2
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
S	1 DRO	3.320-14.340			236106	25.5298	25.5298(a)
$	4 o-Terphenyl	10.824	10.857	-0.033	1237665	81.9932	81.9932
$	5 n-Triacontane-d62	16.377	16.370	0.007	1082554	78.3511	78.3511
S	6 RRO	14.340-19.160			150708	21.2154	21.2154

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Quanterra Alaska

RECOVERY REPORT

Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: 63664-2 Client Smp ID: 63664-2
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_3lcs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	81.9932	81.99	60-120
$ 5 n-Triacontane-d62	~~70.0000~~	78.3511	~~111.93~~ 79	60-120

Data File: /GCFID_B.i/033099B.B/03309B09.D

Date : 30-MAR-1999 16:47

Client ID: 63664-2

Sample Info: 63664-2

Purge Volume: 1000.0

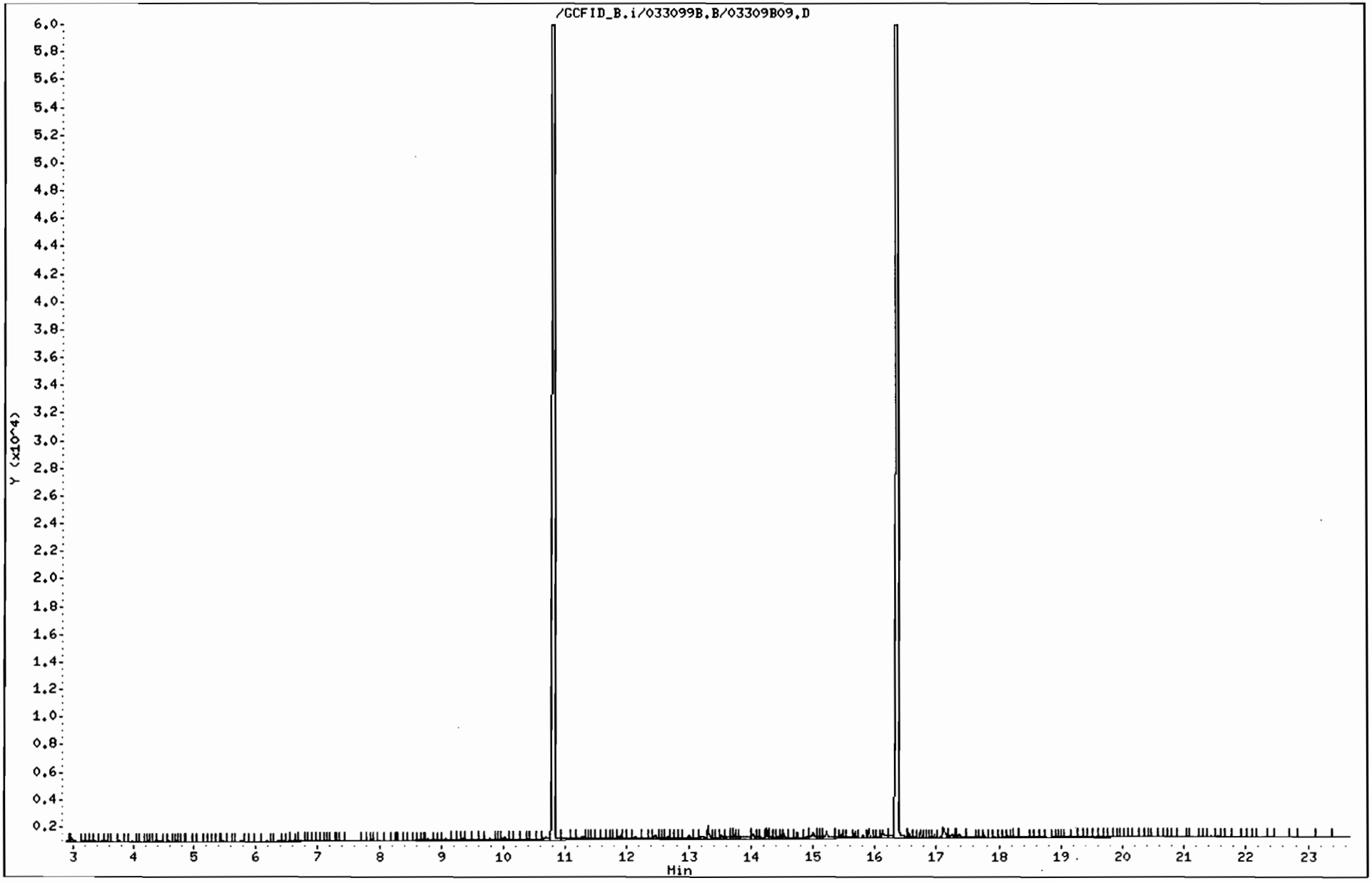
Column phase: DB624

Instrument: GCFID_B.i

Operator: TRA

Column diameter: 0.32

000189



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B10.D
Lab Smp Id: 63664-2ms Client Smp ID: 63664-2ms
Inj Date : 30-MAR-1999 17:17
Operator : TRA Inst ID: GCFID_B.i
Smp Info : 63664-2ms
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)
S	1 DRO	3.320-14.340			4849974	524.420	524.420
S	4 o-Terphenyl	10.827	10.857	-0.030	1232906	81.6779	81.6779
S	5 n-Triacontane-d62	16.385	16.370	0.015	1182648	85.6164	85.6164(R)
S	6 RRO	14.340-19.160			3635430	511.765	511.764

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Quanterra Alaska

RECOVERY REPORT

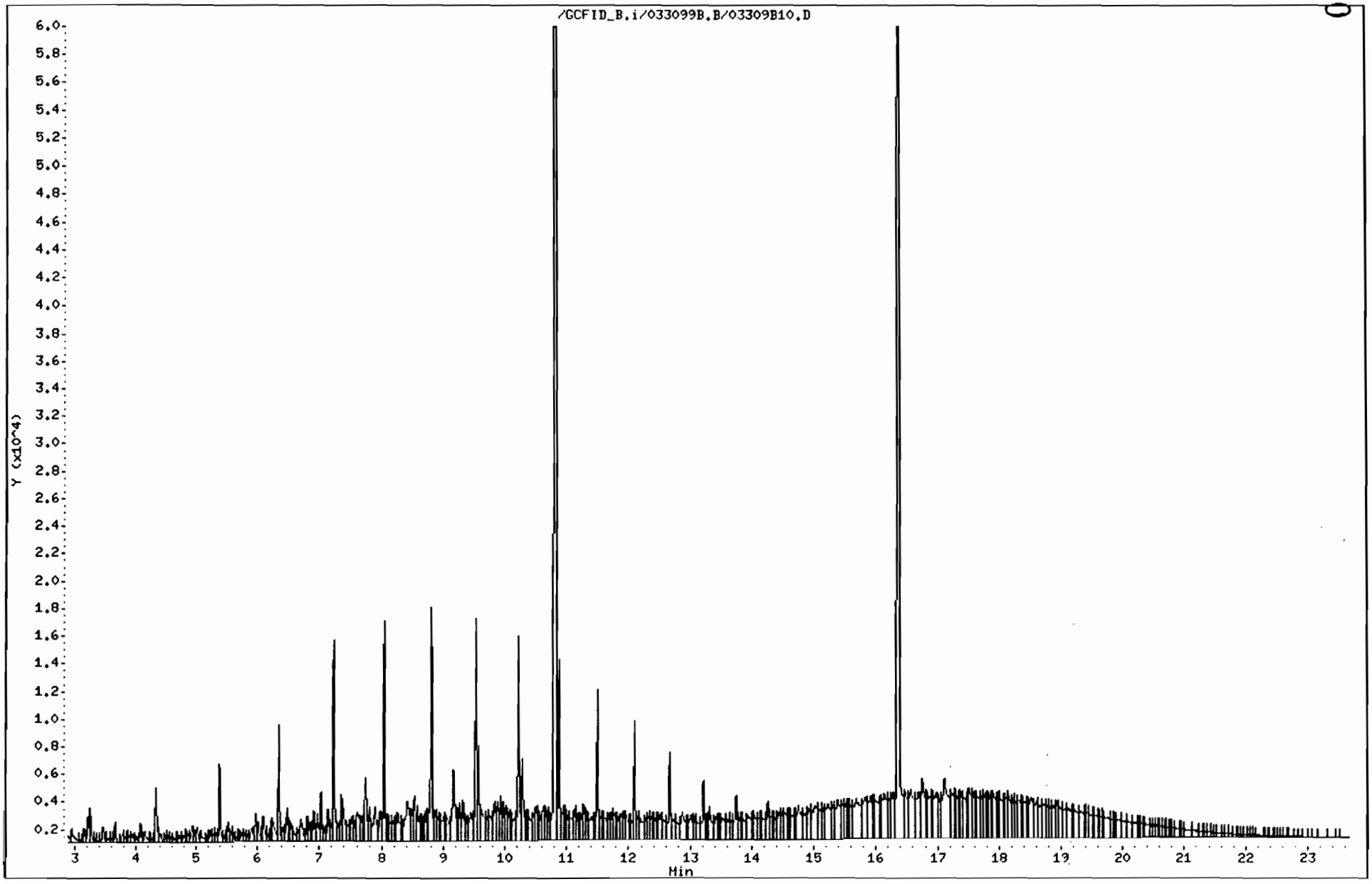
Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: 63664-2ms Client Smp ID: 63664-2ms
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_31cs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	81.6779	81.68	60-120
$ 5 n-Triacontane-d62	~~70.0000~~ 100	85.6164	~~122.31*~~ 86	60-120

Data . ile: /GCFID_B.i/033099B.B/03309B10.D
Date : 30-MAR-1999 17:17
Client ID: 63664-2ms
Sample Info: 63664-2ms
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32

000192



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B11.D
Lab Smp Id: 63664-2sd Client Smp ID: 63664-2sd
Inj Date : 30-MAR-1999 17:47
Operator : TRA Inst ID: GCFID_B.i
Smp Info : 63664-2sd
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds		RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(ug/L)
S	1 DRO	3.320-14.340			4434398	479.485	479.484
S	4 o-Terphenyl	10.827	10.857	-0.030	1240787	82.2000	82.2000
S	5 n-Triacontane-d62	16.385	16.370	0.015	1167812	84.5395	84.5395(R)
S	6 RRO	14.340-19.160			3165328	445.588	445.588

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Quanterra Alaska

RECOVERY REPORT

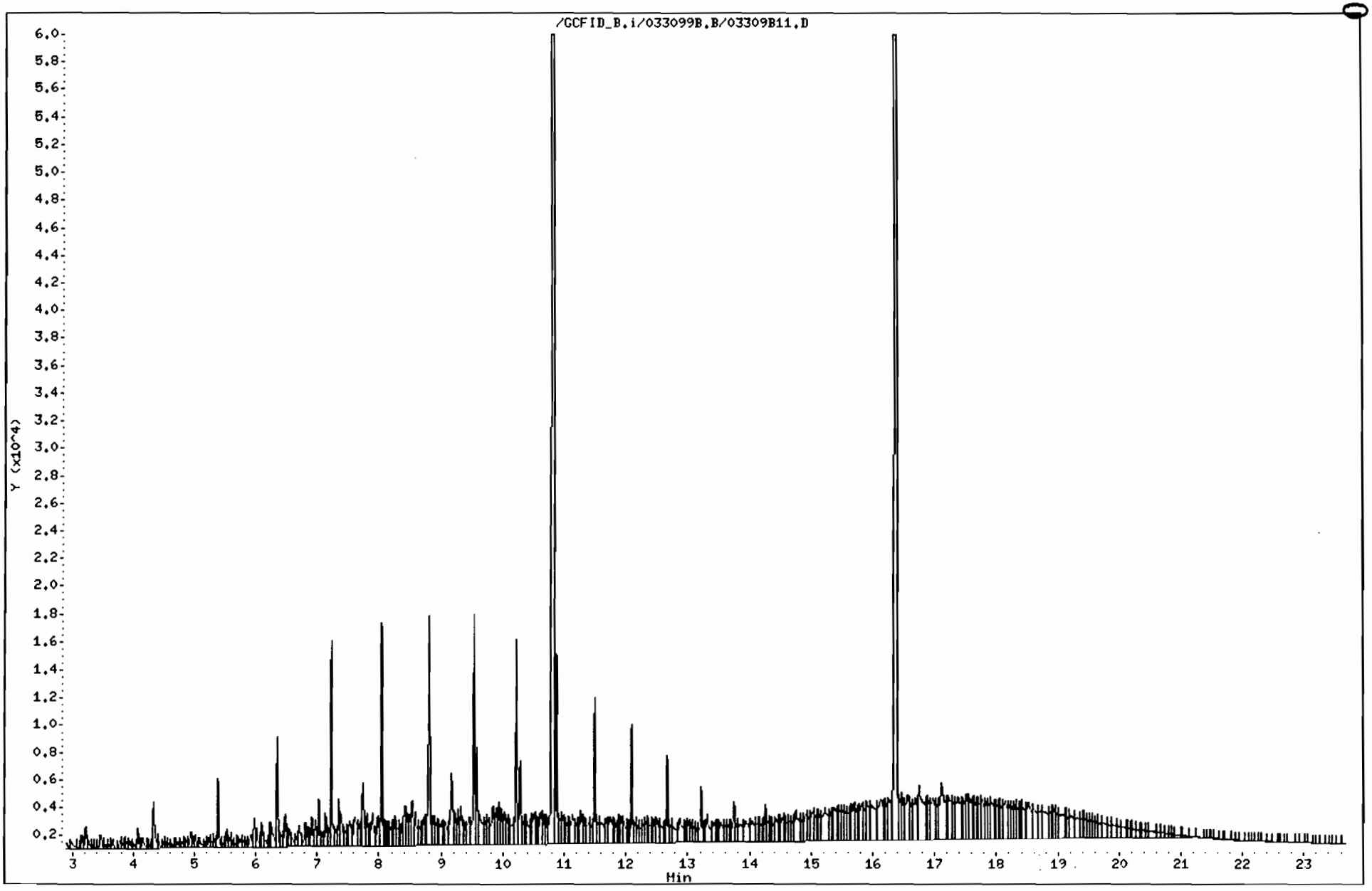
Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: 63664-2sd Client Smp ID: 63664-2sd
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_31cs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	82.2000	82.20	60-120
$ 5 n-Triacontane-d62	~~70.0000~~ 100	84.5395	~~120.77*~~ 55	60-120

Data File: /GCFID_B.i/033099B.B/03309B11.D
Date : 30-MAR-1999 17:47
Client ID: 63664-2sd
Sample Info: 63664-2sd
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32

000195



Quanterra Alaska

AK102/AK103

Data file : \GCFID_B.i\033099B.B\03309B12.D
Lab Smp Id: 63664-3 Client Smp ID: 63664-3
Inj Date : 30-MAR-1999 18:16
Operator : TRA Inst ID: GCFID_B.i
Smp Info : 63664-3
Misc Info :
Comment : ANC-GC-0001 rev.2
Method : \GCFID_B.i\031199B.B\AK102_3r.m
Meth Date : 31-Mar-1999 10:58 AustinT Quant Type: ESTD
Cal Date : 23-FEB-1999 21:44 Cal File: 02239B15.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ak102_103.sub
Target Version: 3.40
Processing Host: ANCP1123

Concentration Formula: Amt * DF * (Vt/Vo)*Uf

Name	Value	Description
DF	1.000	Dilution Factor
Vt	1.000	final extract Volume
Vo	1000.000	Initial Sample Volume
Uf	1000.000	conversion to ug/L

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
S 1	DRO	3.320-14.340			180980	19.5691	~~19.5691(a)~~
$ 4	o-Terphenyl	10.820	10.857	-0.037	1095255	72.5588	72.5588
$ 5	n-Triacontane-d62	16.375	16.370	0.005	991567	71.7468	71.7468
S 6	RRO	14.340-19.160			97597	13.7389	~~13.7389~~

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Quanterra Alaska

RECOVERY REPORT

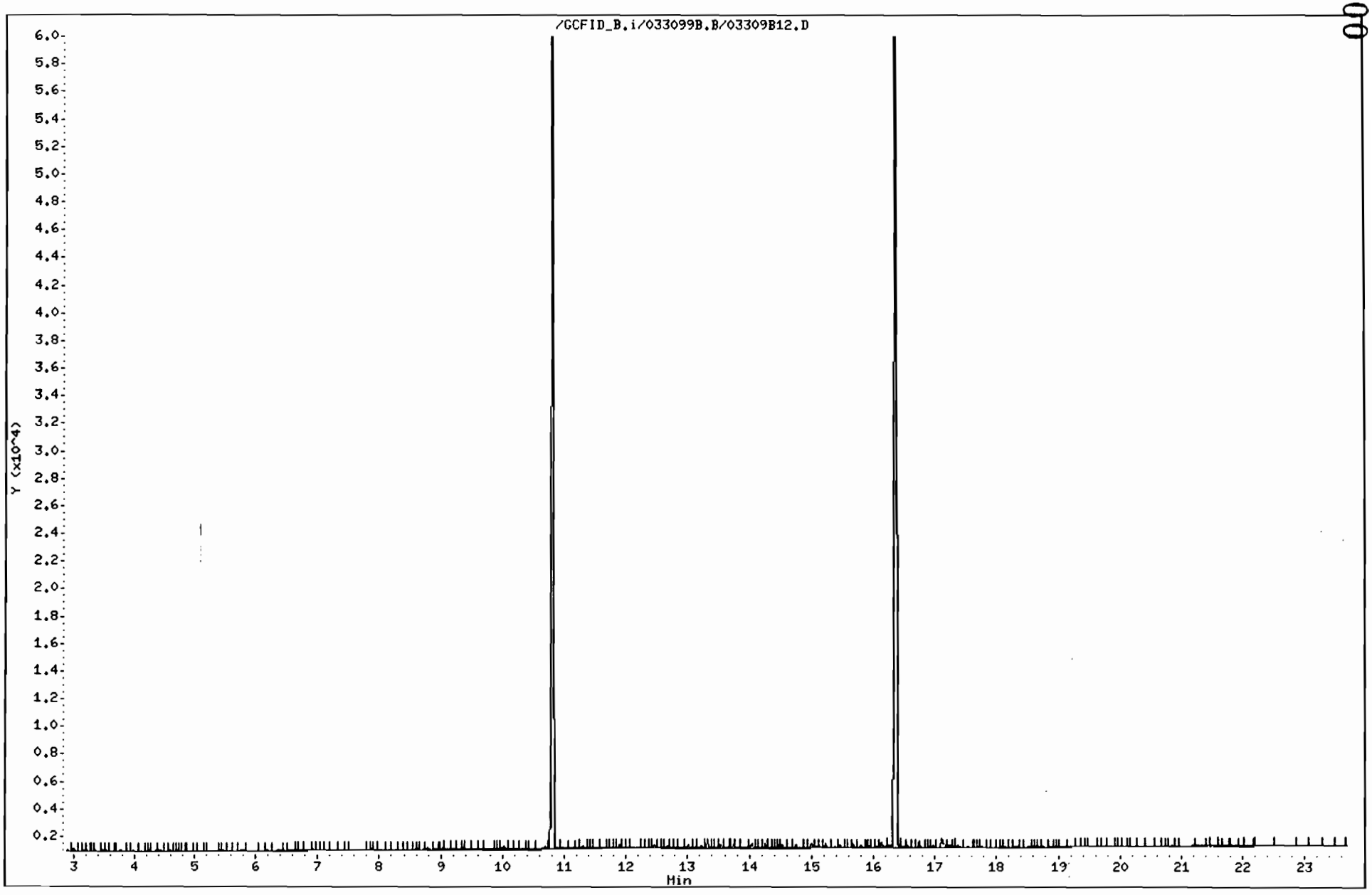
Client Name: Client SDG: 664
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: 63664-3 Client Smp ID: 63664-3
Level: LOW Operator: TRA
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: ak02_3lcs.spk Quant Type: ESTD
Sublist File: ak102_103.sub
Method File: \GCFID_B.i\031199B.B\AK102_3r.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 o-Terphenyl	100.000	72.5588	72.56	60-120
$ 5 n-Triacontane-d62	~~70.0000~~ 100	71.7468	~~102.50~~ 72%	60-120

Data rile: /GCFID_B.i/033099B.B/03309B12.D
Date : 30-MAR-1999 18:16
Client ID: 63664-3
Sample Info: 63664-3
Purge Volume: 1000.0
Column phase: DB624

Instrument: GCFID_B.i
Operator: TRA
Column diameter: 0.32

000198



CHAIN OF CUSTODY

MONTGOMERY WATSON 0636664

Montgomery Watson
4100 Spenard Road
Anchorage AK 99517
(907)248-8883
Fax (907) 248-8884
ATTN: Eileen Maus

Laboratory:
Quanterra, Inc
5761 Silverado Way
Anchorage, Ak 99502
907-563-4800
907-563-4815 FAX
Attn: Cindy LeFerer

MW Job Number:
1189098.040101
14-DAY
TURNAROUND

Sampler's Signature

WATER

1999 Date	Time	Sample ID	Matrix	Total Containers	DRO/RRO - AK 102/103 2-1 L. Amber w/HCl (pH<2) *	GRO/BTEX - AK101/EPA 8021b 3-40 ml vivals w/HCl *	VOC,EPA 8260, 3-40 ml. vivals w/HCl *	SVOC, EPA 8270, 2-1 L amber *	Cool to 4 degrees C	Comments:	
3-26	1000	99 GAM TAP 001	W	12	✓ (pH<2)	✓	✓	✓	✓ ✓	12. 12 * MS/MSD C; Cl⁻ Alk. Ion Balance ↓ NO MS/MSD	0636664-01
3-26	1100	99 GAM NVW 001	W	32	✓ (pH<2)	✓	✓	✓	✓ ✓		* -02
3-26	1115	99 GAM NVW 201	W	12	✓ (pH<2)	✓	✓	✓	✓ ✓		-03
3-26	1900	99 GAM TB032699	W	6		✓	✓				-04 TB
		99 GAM									
		99 GAM									
		99 GAM									
		99 GAM									

COC # GAM01

JS 3/29/98

Relinquished by: Date 3-29-99 Time 11:50

Received for Laboratory by: Date 3-29-99 Time 1:50

Airbill Number: hand delivered by client

Laboratory Notified Faxed

temp 2.6°C, 3.1°C, 3.3°C

Date 3/29/99 Time 11:30 JS

3/24/9911:03 AM

000199

000199

SUPPORTING DOCUMENTATION

QUANTERRA SAMPLE RECEIPT CHECKLIST

Quanterra (Alaska) Project #: 063664 Date / Time Received: 3/29/99, 11:30

Client Name & Sampling Site ID: MONTGOMERY WATSON- CAMBELL

Cooler temperature requirements: No samples frozen and temperature not above 6°C.

If requirements not met then initiate a Condition Upon Receipt form.

Cooler ID(s) and temperature(s). 2.6°C (FRED) 3.1°C (850). 3.3°C (Wake-Up).

Yes	No	Does not Apply		Initials
☑	☐	☐	1. Custody seals present and intact, **COMMENT if "NO".**	JS
☑	☐	☐	2. Chain-of-Custody present, **COMMENT if "NO".**	
☑	☐	☐	a. Chain-of-custody includes "relinquished by" and "received by" signatures, dates and times, **COMMENT if "NO".**	
☑	☐	☐	3. Sample containers labeled, **COMMENT if "NO".**	
☑	☐	☐	4. Chain-of-custody agrees with labels, **COMMENT if "NO".**	
☑	☐	☐	5. Chain-of-custody agrees with bottle count, **COMMENT if "NO".**	
☑	☐	☐	6. Analyses with short holding times required.	
☑	☐	☐	7. VOA containers received with zero headspace, **COMMENT if "NO".**	
☑	☐	☐	a. VOA container labels indicate preservation.	
☑	☐	☐	8. Sample containers are in good order (free of leaks, breaks and appear unfrozen), **COMMENT if "NO".**	
			PHOTOGRAPH BROKEN AND FROZEN CONTAINERS	
☑	☐	☐	9. Samples received are homogeneous single-phase, **COMMENT if "NO".**	
			PHOTOGRAPH MULTIPHASE SAMPLES	
☑	☐	☐	10. Extra sample volume provided for matrix spike and matrix duplicate.	
☑	☐	☐	11. Aqueous phase samples are clean of sediment, **COMMENT if "NO".**	
☑	☐	☐	12. pH of appropriate samples checked and documented on the chain-of-custody, **COMMENT if "NO".**	
☑	☐	☐	13. Clear picture taken, labeled and stapled to project folder.	

Comments (Include action taken to resolve discrepancies / problems): None

000200

Initials: JS

Revision 6 – May 19, 1998.

Log # AK-992075 0074 DMT 4/21/99

LABORATORY NONCONFORMANCE MEMO (NCM)

Quanterra Incorporated

Project ID/Client: 63644/MWA

Sample Numbers: 1-3

NCM Initiated by/Date: TRT 4/1/99

Project Manager: L. LeFevre

Analyst/Team: TH/Organic

Tests: 8270C

Analytical Area (check appropriate area):

- ☐ Sample control
- ☐ Organic preparation
- ☐ Inorganic preparation
- ☐ GC
- ☐ HPLC
- ☐ GC/MS
- ☐ Wet chemistry
- ☐ Metals
- ☐ Reporting
- ☐ Data review
- ☐ Radiochemistry
- ☐ _____

Nonconformance (check appropriate area): *To be completed by analyst*

Holding Time Violations (exceeded by _____ days)

Category I: Laboratory Independent

- ☐ 1. Holding time expired in transit
- ☐ 2. Sample received > 48 hrs. or ½ holding time has expired
- ☐ 3. Test added by client after expiration

Category II: Laboratory Dependent

- ☐ 4. Instrument failure
- ☐ 5. Analyst error
- ☐ 6. Log-in error
- ☐ 7. Miscommunication
- ☐ 8. Other (explanation required)

Category III: Analysis Reruns (QA/QC)

- ☐ 9. Surrogates
- ☐ 10. Internal standards
- ☐ 11. Spike recoveries
- ☐ 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- ☐ 13. Second column
- ☐ 14. Contamination check
- ☐ 15. Confirmation of matrix effects
- ☐ 16. Other (explanation required)

Quality Assurance/Quality Control

- ☐ 17. QC data reported outside of controls
- ☐ 18. Incorrect procedure used
- ☐ 19. SOP intentionally modified with QA and tech approval
- ☐ 20. Invalid instrument calibration
- ☐ 21. Received insufficient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- ☐ 22. Hardcopy deliverable error
- ☐ 23. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- ☐ 24. Sample matrix: Does not include high analyte content
- ☐ 25. Insufficient sample volume
- ☐ 26. Other (explanation required)

Miscellaneous

- ☐ 27. Instrument Tag-out
- ☑ 28. Other (explanation required)

Re-opt Benzoic acid low in LCS

Notification (check appropriate area): ☐ Required ☒ Not Required *To be completed by project manager*

Client notified by (name and date): _____

- ☐ In writing
- ☐ By facsimile
- ☐ By telephone
- ☐ Other (explain)

Client's name and response: _____

- ☐ Process "as is"
- ☐ Re-sample
- ☐ On hold until _____
- ☐ Other (explain)

Project manager (signature and date): L. LeFevre 4/7/99

000201

LABORATORY NONCONFORMANCE MEMO

Corrective Action: *To be completed and reviewed by all associates involved*

Problem Description/Root Cause Author's initials and date: DH 4/1/99

Re-eff. in Hold for Benzoic acid - Low in LCS

Corrective Actions (Short Term) Author's initials and date: DH 4/1/99

① Check Spike Solution

② Re-eff

Corrective Actions to Prevent Reoccurrence (Long Term)

Corrective Action approved by (Supervisor/Group Leader) and date: EH 4/1/99

Additional Comments:

Corrective Action to be completed by (if other than Supervisor/Group Leader): N/A

Date Corrective Action is to be completed: N/A

Quality Assurance Review: **Log ID :** *To be completed by a QA associate*

☑ Anomaly ☐ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required: None.

Further action assigned to:

QA signature: Date:

Corrective Action Verification: *To be completed by a QA associate*

☐ Verification not required or requested

☐ Verified / CA completed on: by

☐ Cannot verify (specify reason)

Verified by: Date:

Nonconformance Memo Closure:

QA signature: Gilbert R Stubbe Date: 4-7-99

The Office of Quality Assurance maintains a copy of this NCM indicating its final status.

000202

Communications Log

Quanterra Environmental Services

1184 2240 Project Number 063664

Name: L. LEFEVER

Date: 3/30/99 Time: 0915 ☐ AM ☐ PM

Type/Contact

☒ Phone ☐ Incoming ☒ Outgoing ☐ Returned Call

☐ Meeting Location:

Participants:

Name of Person contacted:	Organization of Person contacted	Phone/Fax Number
EILEEN HAUS	MONI, WATSON	

Subject: BTEX ANALYSIS

Summary:

BTEX BY 8021 NOT INCLUDED IN PRICE SHEET. ASKED EILEEN IF THEY WANT IT SINCE 8260 IS BEING ANALYZED. SHE SAID TO CANCEL ANALYSIS.

Action Required

000203

DISTRIBUTION: WHITE - Department; CANARY - Record File

Communications Log

Quanterra Environmental Services

2241

Project Number 063664

1-4184

Your Name L. LEFEVER CL 3/31/99

Date 3/31/99 Time 1030 ☒ AM ☐ PM

Type/Contact: ☒ Phone ☒ Incoming ☒ Outgoing ☐ Returned Call

Location: ☐ Meeting

Participants:

Name of Person contacted:	Organization of Person contacted	Phone/Fax Number
EILEEN WALLS	MONI. WATSON	

Subject: 8270 & 8260 ANALYSES

Summary:

EILEEN CALLED TO FIND OUT IF WE INCLUDE ON EXTRACTION LOG FOR 8270 ANY CLEAN-UP PROCEDURE USED. I SAID IT WOULD SHOW IT.

8260 ANALYSIS - I ASKED EILEEN IF MS/MSD ON SAMPLE 063664-03 WAS O.K. TO DO INSTEAD OF -02 AS INDICATED ON COC. SHE SAID IT WAS NOT A PROBLEM.

Action Required

000204

DISTRIBUTION: WHITE - Department; CANARY - Record File

APPENDIX A

CT&E ENVIRONMENTAL SERVICES Inc.

ANCHORAGE, AK

Chain of Custody Record

991262

Quanterra Environmental Services

Gene Lim

QUA-4124

Client: Quanterra Inc	Project Manager: LUCINDA LEFEVER	Date: 3-29-99	Chain Of Custody Number: 21650
Address: 5761 SILVERADO WAY SIE N	Telephone Number (Area Code)/Fax Number: 907 265-8128	Lab Number: 063664	Page 1 of 1
City: ANCHORAGE / State: AK / Zip Code: 99518	Site Contact:		
Project Name: ~~EXXON VALDEZ~~ TK CAMPBELL	Carrier/Waybill Number: Hand delivered		
Contract/Purchase Order/Quote No. 3/29/99			

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers Type	Containers No.	Preservative	Condition on Receipt
063664-01/996AMTAP001	3/26/99	1000	Water	1500ml	Plastic	2	none	
-02/996AMNVW001	3/26/99	1100	water	1000ml	Vials	2		
-03/996AMNVW201	3/26/99	1115	water	1000ml	Vials	2		

Analysis: XXX ALK CL-ION BALANCE

3/29/99

Special Instructions

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Turn Around Time Required: ☒ Normal ☐ Rush

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific (Specify)

	Date	Time		Date	Time
1. Relinquished By: Jayn A. Smith	3/29/99	1540	1. Received By	3/29/99	1540
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report; PINK - Field Copy

000205

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

April 12, 1999

Lucinda Lefever
Quanterra Anchorage Lab
5761 Silverado Way Suite N
Anchorage, AK 99518

Client Name	Quanterra
Project ID	063664 [991262]
Printed	April 12, 1999

Enclosed are the analytical results associated with the above project.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by CT&E. A copy of our Quality Control Manual that outlines this program is available at your request.

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth in our Quality Assurance Program Plan.

If you have any questions regarding this report or if we can be of any other assistance, please call your CT&E Project Manager at (907) 562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value that falls below PQL, but is greater than the MDL.
B - Indicates the analyte is found in the blank associated with the sample.
* - The analyte has exceeded allowable limits.
GT - Greater Than
D - Secondary Dilution
LT - Less Than
! - Surrogate out of range

CT&E Environmental Services Inc.

CT&E Ref.#	991262001
Client Name	Quanterra
Project Name/#	063664
Client Sample ID	063664-01/996AMTAP001
Matrix	Water (Surface, Eff., Ground)
Ordered By	
PWSID	

Client PO#	
Printed Date/Time	04/12/99 16:23
Collected Date/Time	03/26/99 10:00
Received Date/Time	03/29/99 15:40
Technical Director: Stephen C. Ede	

Released By S C Ede

Sample Remarks:

Parameter	Results	PQL	units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Barium	0.0100 u	0.0100	mg/L	EPA 200.7			03/31/99	WTA
Calcium	24.0	1.00	mg/L	EPA 200.7			03/31/99	WTA
Iron	0.232	0.0500	mg/L	EPA 200.7			03/31/99	WTA
Potassium	4.93	4.50	mg/L	EPA 200.7			03/31/99	WTA
Magnesium	9.52	0.100	mg/L	EPA 200.7			03/31/99	WTA
Sodium	54.3	1.00	mg/L	EPA 200.7			03/31/99	WTA
Strontium	0.127	0.0300	mg/L	EPA 200.7			03/31/99	WTA
pH	5.84		pH units	EPA 150.1			03/31/99	JMP
Alkalinity	8.59	2.00	mg/L	SM18 2320B			04/08/99	JMP
HCO3 Alkalinity	8.59	2.00	mg/L	SM18 2320B			04/08/99	JMP
CO3 Alkalinity	2.00 u	2.00	mg/L	SM18 2320B			04/08/99	JMP
OH Alkalinity	2.00 u	2.00	mg/L	SM18 2320B			04/08/99	JMP
Resistivity	20.0		ohm-m	SM16 205			03/31/99	JMP
Waters Department Analyses								
Chloride	122	5.00	mg/L	EPA 300.0		04/01/99	04/01/99	SCL
Sulfate	28.2	1.00	mg/L	EPA 300.0		04/01/99	04/01/99	SCL

Cation - Anion Balance Calculation Sheet - Method SM 1030F

Analyst :

Date :

CT&E Sample Number: 991262001

Note: For the purposes of this calculation sheet, the input values for SiO_3^{-2} and Nitrate are mg/L Silicon (from ICP data) and mg/L Nitrate-N (from EP300 data) respectivly.

Cations

	mg/L	Meq/L
Sodium	54.3	2.36
Potassium	4.93	0.13
Calcium	24	1.20
Magnesium	9.52	0.78
Silicon as SiO_3^{-2}	4.91	0.35

Total Cations, meq/L = 4.82

Anions

	mg/L	Meq/L
Sulfate	28.2	0.59
Chloride	122	3.44
Nitrate	7.74	0.55
Fluoride		0.00
Carbonate		0.00
Bicarbonate	8.59	0.14
Hydroxide		0.00

Total Anions, meq/L = 4.72

Total Dissolved Solids, (calc) = 260.754 mg/L

Total Dissolved Solids, (obs) = mg/L

Observed pH 5.84 pH Units

Resistivity @ 68°F = 20 ohm-meters

Barium	mg/L
Strontium	0.127 mg/L
Iron	0.232 mg/L

% Difference = 1.03%

By Method SM 1030F

Acceptance Criteria

Anion Sum (Meq/L)	Acceptable % Difference
0 - 3.0	+/- 0.2 meq/L
3.0- 10.0	+/- 2 %
10.0 - 800	5%

Analyst

4-13-99

Date

CT&E Environmental Services Inc.

CT&E Ref.#	991262002	**Client PO#**	
Client Name	Quanterra	**Printed Date/Time**	04/12/99 16:23
Project Name/#	063664	**Collected Date/Time**	03/26/99 11:00
Client Sample ID	063664-02/996AMNVW001	**Received Date/Time**	03/29/99 15:40
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	

Sample Remarks:

Parameter	Results	PQL	units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Barium	0.0100 u	0.0100	mg/L	EPA 200.7			03/31/99	WTA
Calcium	20.4	1.00	mg/L	EPA 200.7			03/31/99	WTA
Iron	0.443	0.0500	mg/L	EPA 200.7			03/31/99	WTA
Potassium	4.84	4.50	mg/L	EPA 200.7			03/31/99	WTA
Magnesium	9.48	0.100	mg/L	EPA 200.7			03/31/99	WTA
Sodium	56.9	1.00	mg/L	EPA 200.7			03/31/99	WTA
Strontium	0.125	0.0300	mg/L	EPA 200.7			03/31/99	WTA
pH	5.82		pH units	EPA 150.1			03/31/99	JNP
Alkalinity	13.4	2.00	mg/L	SM18 2320B			04/08/99	JNP
HCO3 Alkalinity	13.4	2.00	mg/L	SM18 2320B			04/08/99	JNP
CO3 Alkalinity	2.00 u	2.00	mg/L	SM18 2320B			04/08/99	JNP
OH Alkalinity	2.00 u	2.00	mg/L	SM18 2320B			04/08/99	JNP
Resistivity	18.2		ohm-m	SM16 205			03/31/99	JNP
Waters Department Analyses								
Chloride	114	5.00	mg/L	EPA 300.0		04/01/99	04/01/99	SCL
Sulfate	31.1	1.00	mg/L	EPA 300.0		04/01/99	04/01/99	SCL

Cation - Anion Balance Calculation Sheet - Method SM 1030F

Analyst :

Date :

CT&E Sample Number: 991262002

Note: For the purposes of this calculation sheet, the input values for SiO_3^{-2} and Nitrate are mg/L Silicon (from ICP data) and mg/L Nitrate-N (from EP300 data) respectivly.

Cations

	mg/L	Meq/L
Sodium	56.9	2.48
Potassium	4.84	0.12
Calcium	20.4	1.02
Magnesium	9.48	0.78
Silicon as SiO_3^{-2}	4.88	0.35

Total Cations, meq/L = 4.74

Anions

	mg/L	Meq/L
Sulfate	31.1	0.65
Chloride	114	3.21
Nitrate	7.44	0.53
Fluoride		0.00
Carbonate		0.00
Bicarbonate	13.4	0.22
Hydroxide		0.00

Total Anions, meq/L = 4.61

Total Dissolved Solids, (calc) = 257.08 mg/L

Total Dissolved Solids, (obs) = mg/L

Observed pH 5.82 pH Units

Resistivity @ 68°F = 18.2 ohm-meters

Barium mg/L

Strontium 0.125 mg/L

Iron 0.443 mg/L

% Difference = 1.41%

By Method SM 1030F

Shawn Parker

Analyst

4-13-99

Date

Acceptance Criteria

Anion Sum (Meq/L)	Acceptable % Difference
0 - 3.0	+/- 0.2 meq/L
3.0- 10.0	+/- 2 %
10.0 - 800	5%

CT&E Environmental Services Inc.

CT&E Ref.#	991262003
Client Name	Quanterra
Project Name/#	063664
Client Sample ID	063664-03/996AMNVW201
Matrix	Water (Surface, Eff., Ground)
Ordered By	
PWSID	

Client PO#	
Printed Date/Time	04/12/99 16:23
Collected Date/Time	03/26/99 11:15
Received Date/Time	03/29/99 15:40
Technical Director: Stephen C. Ede	

Released By Shawn Parker

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Barium	0.0100 u	0.0100	mg/L	EPA 200.7			03/31/99	WTA
Calcium	20.9	1.00	mg/L	EPA 200.7			03/31/99	WTA
Iron	0.375	0.0500	mg/L	EPA 200.7			03/31/99	WTA
Potassium	5.45	4.50	mg/L	EPA 200.7			03/31/99	WTA
Magnesium	9.63	0.100	mg/L	EPA 200.7			03/31/99	WTA
Sodium	56.9	1.00	mg/L	EPA 200.7			03/31/99	WTA
Strontium	0.126	0.0300	mg/L	EPA 200.7			03/31/99	WTA
pH	5.90		pH units	EPA 150.1			03/31/99	JMP
Alkalinity	14.3	2.00	mg/L	SM18 2320B			04/08/99	JMP
HCO3 Alkalinity	14.3	2.00	mg/L	SM18 2320B			04/08/99	JMP
CO3 Alkalinity	2.00 u	2.00	mg/L	SM18 2320B			04/08/99	JMP
OH Alkalinity	2.00 u	2.00	mg/L	SM18 2320B			04/08/99	JMP
Resistivity	20.0		ohm-m	SM16 205			03/31/99	JMP
Waters Department Analyses								
Chloride	109	5.00	mg/L	EPA 300.0		04/01/99	04/01/99	SCL
Sulfate	25.2	1.00	mg/L	EPA 300.0		04/01/99	04/01/99	SCL

Cation - Anion Balance Calculation Sheet - Method SM 1030F

SB EMW 99GAMNUW201

Analyst :

Date :

CT&E Sample Number: 991262003

Note: *For the purposes of this calculation sheet, the input values for SiO_3^{-2} and Nitrate are mg/L Silicon (from ICP data) and mg/L Nitrate-N (from EP300 data) respectivly.*

Cations

	mg/L	Meq/L
Sodium	56.9	2.48
Potassium	5.45	0.14
Calcium	20.9	1.04
Magnesium	9.63	0.79
Silicon as SiO_3^{-2}	5.13	0.37

Total Cations, meq/L = 4.81

Anions

	mg/L	Meq/L
Sulfate	25.2	0.52
Chloride	109	3.07
Nitrate	7.47	0.53
Fluoride		0.00
Carbonate		0.00
Bicarbonate	14.3	0.23
Hydroxide		0.00

Total Anions, meq/L = 4.37

Total Dissolved Solids, (calc) = 248.26 mg/L

Total Dissolved Solids, (obs) = mg/L

Observed pH 5.9 pH Units

Resistivity @ 68°F = 20 ohm-meters

Barium mg/L

Strontium 0.126 mg/L

Iron 0.375 mg/L

% Difference = 4.89%

By Method SM 1030F

Shawn Patton

Analyst

4-13-99

Date

Acceptance Criteria

Anion Sum (Meq/L)	Acceptable % Difference
0 - 3.0	+/- 0.2 meq/L
3.0- 10.0	+/- 2 %
10.0 - 800	5%