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ANALYTICAL RESULTS
FOR
U.S. GEOLOGICAL SURVEY
ENSECO-RMAL NO. 011121

Enseco

SEPTEMBER 28, 1990

KAFB1050



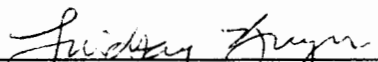
ANALYTICAL RESULTS
FOR
U.S. GEOLOGICAL SURVEY
ENSECO-RMAL NO. 011121

Enseco

SEPTEMBER 28, 1990

Reviewed by:


Randall Thompson


Lindsay Breyer

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Introduction

This report presents the analytical results as well as supporting information to aid in the evaluation and interpretation of the data and is arranged in the following order:

- o Sample Description Information
- o Analytical Test Requests
- o Analytical Results
- o Quality Control Report

Due to a laboratory scheduling error, the holding time was exceeded during the method 8240 analysis of samples 011171-0001 and -0003.

Sample Description Information

The Sample Description Information lists all of the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

SAMPLE DESCRIPTION INFORMATION
for
U.S. Geological Survey

Lab ID	Client ID	Matrix	Sampled Date	Time	Received Date
011121-0001-SA	KAFB050210-2	AQUEOUS	28 AUG 90	09:10	29 AUG 90
011121-0002-SA	KAFB050108-2	AQUEOUS	28 AUG 90	15:30	29 AUG 90
011121-0003-SA	KAFB050211-2	AQUEOUS	28 AUG 90	09:00	29 AUG 90
011121-0004-SA	KAFB050212-2	AQUEOUS	28 AUG 90	11:30	29 AUG 90

ANALYTICAL TEST REQUESTS
for
U.S. Geological Survey

Lab ID: 011121	Group Code	Analysis Description	Custom Test?
0001	A	Total Organic Carbon (TOC)	N
		Total Organic Halogen (TOX)	N
		Nitrate Plus Nitrite	N
		Chromium, Furnace AA	N
		Chromium, Furnace AA (Total)	N
		Prep - Total Metals, ICP	N
		AFIR Volatile Screen	N
		Volatile Organics	N
		Appendix IX List	N
		Volatiles Library Search (10 Compound TID)	N
0002	B	Total Organic Carbon (TOC)	N
		Total Organic Halogen (TOX)	N
		Nitrate Plus Nitrite	N
		Chromium, Furnace AA	N
		Chromium, Furnace AA (Total)	N
		Prep - Total Metals, ICP	N
0003 - 0004	C	AFIR Volatile Screen	N
		Volatile Organics	N
		Appendix IX List	N
		Volatiles Library Search (10 Compound TID)	N

Analytical Results

The analytical results for this project are presented in the following data tables. Each data table includes sample identification information, and when available and appropriate, dates sampled, received, authorized, prepared and analyzed. The authorization data is the date when the project was defined by the client such that laboratory work could begin.

Data sheets contain a listing of the parameters measured in each test, the analytical results and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, May, 1989.

The results from the Standard Enseco QA/QC Program, which generates data which are independent of matrix effects, is provided subsequently.

Volatile Organics
Appendix IX List
Method 8240

Client Name: U.S. Geological Survey
Client ID: KAFB050210-2
Lab ID: 011121-0001-SA
Matrix: AQUEOUS
Authorized: 29 AUG 90

Sampled: 28 AUG 90
Prepared: NA

Received: 29 AUG 90
Analyzed: 24 SEP 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	200
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Chloroprene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,2-Dibromo-3-chloro- propane (DBCP)	ND	ug/L	10
1,2-Dibromoethane (EDB)	ND	ug/L	10
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro- 2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	20
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	500
Ethylbenzene	ND	ug/L	5.0
Ethyl methacrylate	ND	ug/L	20
Iodomethane	ND	ug/L	5.0
Isobutanol	ND	ug/L	200
2-Hexanone	ND	ug/L	10
Methacrylonitrile	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Michael Blades

Approved By: Jeff Lowry

Volatile Organics
Appendix IX List
Method 8240

Client Name: U.S. Geological Survey
Client ID: KAFB050210-2
Lab ID: 011121-0001-SA
Matrix: AQUEOUS
Authorized: 29 AUG 90

Sampled: 28 AUG 90
Prepared: NA

Received: 29 AUG 90
Analyzed: 24 SEP 90

Parameter	Result	Units	Reporting Limit
Methyl methacrylate	ND	ug/L	20
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Propionitrile	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Surrogate	Recovery		
Toluene-d8	100	%	--
4-Bromofluorobenzene	97	%	--
1,2-Dichloroethane-d4	101	%	--

ND = Not detected
NA = Not applicable

Reported By: Michael Blades

Approved By: Jeff Lowry

TENTATIVELY IDENTIFIED COMPOUNDS

FOR

U.S. GEOLOGICAL SURVEY

SAMPLE NUMBER 011121-0001

<u>Compound Name</u>	<u>Fraction</u>	<u>Confidence Level</u>	<u>Estimated Concentration ug/L</u>
None detected	VOA		

NOTES:

Confidence Levels

- Level 3 - Confirmed Identification
- Level 2 - Confident Identification
- Level 1 - Tentative Identification

Please refer to the discussion for further details.

Volatile Organics
Appendix IX List
Method 8240

Client Name: U.S. Geological Survey

Client ID: KAFB050211-2

Lab ID: 011121-0003-SA

Matrix: AQUEOUS

Authorized: 29 AUG 90

Sampled: 28 AUG 90

Prepared: NA

Received: 29 AUG 90

Analyzed: 17 SEP 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	200
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Chloroprene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,2-Dibromo-3-chloro- propane (DBCP)	ND	ug/L	10
1,2-Dibromoethane (EDB)	ND	ug/L	10
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro- 2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	20
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	500
Ethylbenzene	ND	ug/L	5.0
Ethyl methacrylate	ND	ug/L	20
Iodomethane	ND	ug/L	5.0
Isobutanol	ND	ug/L	200
2-Hexanone	ND	ug/L	10
Methacrylonitrile	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller

Approved By: Jeff Lowry

Volatile Organics
Appendix IX List
Method 8240

Client Name: U.S. Geological Survey

Client ID: KAFB050211-2

Lab ID: 011121-0003-SA

Matrix: AQUEOUS

Authorized: 29 AUG 90

Sampled: 28 AUG 90

Prepared: NA

Received: 29 AUG 90

Analyzed: 17 SEP 90

Parameter	Result	Units	Reporting Limit
Methyl methacrylate	ND	ug/L	20
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Propionitrile	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Surrogate	Recovery		
Toluene-d8	100	%	--
4-Bromofluorobenzene	99	%	--
1,2-Dichloroethane-d4	110	%	--

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller

Approved By: Jeff Lowry

TENTATIVELY IDENTIFIED COMPOUNDS
FOR
U.S. GEOLOGICAL SURVEY

SAMPLE NUMBER 011121-0003

<u>Compound Name</u>	<u>Fraction</u>	<u>Confidence Level</u>	<u>Estimated Concentration ug/L</u>
None detected	VOA		

NOTES:

Confidence Levels

- Level 3 - Confirmed Identification
- Level 2 - Confident Identification
- Level 1 - Tentative Identification

Please refer to the discussion for further details.

Volatile Organics
Appendix IX List
Method 8240

Client Name: U.S. Geological Survey
Client ID: KAFB050212-2
Lab ID: 011121-0004-SA
Matrix: AQUEOUS
Authorized: 29 AUG 90

Sampled: 28 AUG 90
Prepared: NA

Received: 29 AUG 90
Analyzed: 09 AUG 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	200
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Chloroprene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,2-Dibromo-3-chloro- propane (DBCP)	ND	ug/L	10
1,2-Dibromoethane (EDB)	ND	ug/L	10
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro- 2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	20
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	500
Ethylbenzene	ND	ug/L	5.0
Ethyl methacrylate	ND	ug/L	20
Iodomethane	ND	ug/L	5.0
Isobutanol	ND	ug/L	200
2-Hexanone	ND	ug/L	10
Methacrylonitrile	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas

Approved By: Jeff Lowry

Volatile Organics
Appendix IX List
Method 8240

Client Name: U.S. Geological Survey

Client ID: KAFB050212-2

Lab ID: 011121-0004-SA

Matrix: AQUEOUS

Authorized: 29 AUG 90

Sampled: 28 AUG 90

Prepared: NA

Received: 29 AUG 90

Analyzed: 09 AUG 90

Parameter	Result	Units	Reporting Limit
Methyl methacrylate	ND	ug/L	20
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Propionitrile	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Surrogate	Recovery		
Toluene-d8	105	%	--
4-Bromofluorobenzene	94	%	--
1,2-Dichloroethane-d4	84	%	--

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas

Approved By: Jeff Lowry

TENTATIVELY IDENTIFIED COMPOUNDS

FOR

U.S. GEOLOGICAL SURVEY

SAMPLE NUMBER 011121-0004

<u>Compound Name</u>	<u>Fraction</u>	<u>Confidence Level</u>	<u>Estimated Concentration ug/L</u>
None detected	VOA		

NOTES:

Confidence Levels

- Level 3 - Confirmed Identification
- Level 2 - Confident Identification
- Level 1 - Tentative Identification

Please refer to the discussion for further details.

Metals

Total Metals

Client Name: U.S. Geological Survey
Client ID: KAFB050210-2
Lab ID: 011121-0001-SA
Matrix: AQUEOUS
Authorized: 29 AUG 90

Sampled: 28 AUG 90
Prepared: See Below

Received: 29 AUG 90
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium	0.017	mg/L	0.0050	7191	14 SEP 90	18 SEP 90

ND = Not detected
NA = Not applicable

Reported By: Mike Befort

Approved By: Roxanne Sullivan

Metals

Total Metals

Client Name: U.S. Geological Survey
Client ID: KAFB050108-2
Lab ID: 011121-0002-SA
Matrix: AQUEOUS
Authorized: 29 AUG 90

Sampled: 28 AUG 90
Prepared: See Below

Received: 29 AUG 90
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium	0.014	mg/L	0.010	7191	14 SEP 90	18 SEP 90

ND = Not detected
NA = Not applicable

Reported By: Mike Befort

Approved By: Roxanne Sullivan

Metals

Dissolved Metals

Client Name: U.S. Geological Survey
 Client ID: KAFB050210-2
 Lab ID: 011121-0001-SA
 Matrix: AQUEOUS
 Authorized: 29 AUG 90

Sampled: 28 AUG 90
 Prepared: See Below

Received: 29 AUG 90
 Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium	ND	mg/L	0.0050	7191	NA	11 SEP 90

ND = Not detected
 NA = Not applicable

Reported By: Scott Moroschan

Approved By: Roxanne Sullivan

Metals

Dissolved Metals

Client Name: U.S. Geological Survey
 Client ID: KAFB050108-2
 Lab ID: 011121-0002-SA
 Matrix: AQUEOUS
 Authorized: 29 AUG 90

Sampled: 28 AUG 90
 Prepared: See Below

Received: 29 AUG 90
 Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium	ND	mg/L	0.0050	7191	NA	11 SEP 90

ND = Not detected
 NA = Not applicable

Reported By: Scott Moroschan

Approved By: Roxanne Sullivan

General Inorganics

Client Name: U.S. Geological Survey
 Client ID: KAFB050210-2
 Lab ID: 011121-0001-SA
 Matrix: AQUEOUS
 Authorized: 29 AUG 90

Sampled: 28 AUG 90
 Prepared: See Below

Received: 29 AUG 90
 Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Nitrate plus Nitrite	1.1	mg/L	0.10	353.2	NA	06 SEP 90
Total Organic Carbon	1.2	mg/L	0.50	9060	NA	31 AUG 90
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	18 SEP 90

ND = Not detected
 NA = Not applicable

Reported By: Steve Pope

Approved By: Roxanne Sullivan

General Inorganics

Client Name: U.S. Geological Survey
 Client ID: KAFB050108-2
 Lab ID: 011121-0002-SA
 Matrix: AQUEOUS
 Authorized: 29 AUG 90

Sampled: 28 AUG 90
 Prepared: See Below

Received: 29 AUG 90
 Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Nitrate plus Nitrite	1.6	mg/L	0.10	353.2	NA	06 SEP 90
Total Organic Carbon	0.65	mg/L	0.50	9060	NA	31 AUG 90
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	18 SEP 90

ND = Not detected
 NA = Not applicable

Reported By: Steve Pope

Approved By: Roxanne Sullivan

Quality Control Results

The Enseco laboratories operate under a vigorous QA/QC program designed to ensure the generation of scientifically valid, legally defensible data by monitoring every aspect of laboratory operations. Routine QA/QC procedures include the use of approved methodologies, independent verification of analytical standards, use of duplicate Laboratory Control Samples to assess the precision and accuracy of the methodology on a routine basis, and a rigorous system of data review.

In addition, the Enseco laboratories maintain a comprehensive set of certifications from both state and federal governmental agencies which require frequent analyses of blind audit samples. Enseco - Rocky Mountain Analytical Laboratory is certified by the EPA under the EPA/CLP program for both Organic and Inorganic analyses, under the USATHAMA (U.S. Army) program, by the Army Corps of Engineers, and the states of Colorado, New Jersey, New York, Utah, and Florida, among others.

The standard laboratory QC package is designed to:

- 1) establish a strong, cost-effective QC program that ensures the generation of scientifically valid, legally defensible data
- 2) assess the laboratory's performance of the analytical method using control limits generated with a well-defined matrix
- 3) establish clear-cut guidelines for acceptability of analytical data so that QC decisions can be made immediately at the bench, and
- 4) provide a standard set of reportables which assures the client of the quality of his data.

The Enseco QC program is based upon monitoring the precision and accuracy of an analytical method by analyzing a set of Duplicate Control Samples (DCS) at frequent, well-defined intervals. Each DCS is a well-characterized matrix which is spiked with target compounds at 5-100 times the reporting limit, depending upon the methodology being monitored. The purpose of the DCS is not to duplicate the sample matrix, but rather to provide an interference-free, homogeneous matrix from which to gather data to establish control limits. These limits are used to determine whether data generated by the laboratory on any given day is in control.

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/- 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. These control limits are fairly narrow based on the consistency of the matrix being monitored and are updated on a quarterly basis.

For each batch of samples analyzed, an additional control measure is taken in the form of a Single Control Sample (SCS). The SCS consists of a control matrix that is spiked with either representative target compounds or surrogate compounds appropriate to the method being used. An SCS is prepared for each sample lot for which the DCS pair are not analyzed.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

All samples analyzed concurrently by the same test are assigned the same QC lot number. Projects which contain numerous samples, analyzed over several days, may have multiple QC lot numbers associated with each test. The QC information which follows includes a listing of the QC lot numbers associated with each of the samples reported, DCS and SCS (where applicable) recoveries from the QC lots associated with the samples, and control limits for these lots. The QC data is reported by test code, in the order that the tests are reported in the analytical results section of this report.

QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
011121-0001-SA	AQUEOUS	624-A	24 SEP 90-H	24 SEP 90-H2
011121-0003-SA	AQUEOUS	624-A	14 AUG 90-D	17 SEP 90-D
011121-0004-SA	AQUEOUS	624-A	08 SEP 90-B	09 SEP 90-B

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average (%)		Precision (RPD)		
		DCS1	DCS2		DCS	Limits	DCS	Limit	
Category: 624-A									
Matrix: AQUEOUS									
QC Lot: 24 SEP 90-H									
Concentration Units: ug/L									
1,1-Dichloroethene	50	47.5	45.4	46.4	93	61-145	4.5	14	
Trichloroethene	50	54.3	52.7	53.5	107	71-120	3.0	14	
Benzene	50	53.8	50.8	52.3	105	76-127	5.7	11	
Toluene	50	53.8	52.5	53.2	106	76-125	2.4	13	
Chlorobenzene	50	57.6	56.5	57.0	114	75-130	1.9	13	

Category: 624-A
Matrix: AQUEOUS
QC Lot: 14 AUG 90-D
Concentration Units: ug/L

1,1-Dichloroethene	50	53.0	51.6	52.3	105	61-145	2.7	14
Trichloroethene	50	51.3	50.6	51.0	102	71-120	1.4	14
Benzene	50	52.9	52.5	52.7	105	76-127	0.8	11
Toluene	50	55.9	56.8	56.4	113	76-125	1.6	13
Chlorobenzene	50	56.2	55.3	55.8	112	75-130	1.6	13

Category: 624-A
Matrix: AQUEOUS
QC Lot: 08 SEP 90-B
Concentration Units: ug/L

1,1-Dichloroethene	50	47.8	49.6	48.7	97	61-145	3.7	14
Trichloroethene	50	51.2	48.6	49.9	100	71-120	5.2	14
Benzene	50	55.0	54.4	54.7	109	76-127	1.1	11
Toluene	50	59.6	56.4	58.0	116	76-125	5.5	13
Chlorobenzene	50	58.3	52.1	55.2	110	75-130	11	13

Calculations are performed before rounding to avoid round-off errors in calculated results.

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits
Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 24 SEP 90-H QC Run: 24 SEP 90-H2				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	45.7	91	76-114
4-Bromofluorobenzene	50.0	49.6	99	86-115
Toluene-d8	50.0	52.1	104	88-110

Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 14 AUG 90-D QC Run: 17 SEP 90-D				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	52.5	105	76-114
4-Bromofluorobenzene	50.0	50.8	102	86-115
Toluene-d8	50.0	51.5	103	88-110

Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 08 SEP 90-B QC Run: 09 SEP 90-B				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	49.2	98	76-114
4-Bromofluorobenzene	50.0	50.1	100	86-115
Toluene-d8	50.0	53.8	108	88-110

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Volatile Organics by GC/MS

Analyte	Result	Units	Reporting Limit
Test: 8240CP-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 24 SEP 90-H QC Run: 24 SEP 90-H2			
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	200
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Chloroprene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,2-Dibromo-3-chloro- propane (DBCP)	ND	ug/L	10
1,2-Dibromoethane (EDB)	ND	ug/L	10
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro- 2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	20
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	500
Ethylbenzene	ND	ug/L	5.0
Ethyl methacrylate	ND	ug/L	20
Iodomethane	ND	ug/L	5.0
Isobutanol	ND	ug/L	200
2-Hexanone	ND	ug/L	10
Methacrylonitrile	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8240CP-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 24 SEP 90-H QC Run: 24 SEP 90-H2			
Methyl methacrylate	ND	ug/L	20
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Propionitrile	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 14 AUG 90-D QC Run: 17 SEP 90-D

Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	200
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Chloroprene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8240CP-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 14 AUG 90-D QC Run: 17 SEP 90-D			
1,2-Dibromo-3-chloro- propane (DBCP)	ND	ug/L	10
1,2-Dibromoethane (EDB)	ND	ug/L	10
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro- 2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	20
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	500
Ethylbenzene	ND	ug/L	5.0
Ethyl methacrylate	ND	ug/L	20
Iodomethane	ND	ug/L	5.0
Isobutanol	ND	ug/L	200
2-Hexanone	ND	ug/L	10
Methacrylonitrile	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0
Methyl methacrylate	ND	ug/L	20
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Propionitrile	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8240CP-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 08 SEP 90-B QC Run: 09 SEP 90-B			
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	200
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	10
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
2-Butanone (MEK)	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
Chloroprene	ND	ug/L	5.0
Dibromochloromethane	ND	ug/L	5.0
1,2-Dibromo-3-chloro- propane (DBCP)	ND	ug/L	10
1,2-Dibromoethane (EDB)	ND	ug/L	10
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro- 2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	20
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,2-Dichloroethene (total)	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	500
Ethylbenzene	ND	ug/L	5.0
Ethyl methacrylate	ND	ug/L	20
Iodomethane	ND	ug/L	5.0
Isobutanol	ND	ug/L	200
2-Hexanone	ND	ug/L	10
Methacrylonitrile	ND	ug/L	5.0
Methylene chloride	ND	ug/L	5.0

METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 8240CP-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 08 SEP 90-B	QC Run: 09 SEP 90-B		
Methyl methacrylate	ND	ug/L	20
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10
Propionitrile	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
011121-0001-SA	AQUEOUS	CR-FAA-AD	11 SEP 90-A	-
011121-0001-SA	AQUEOUS	CR-FAA-AT	14 SEP 90-A	14 SEP 90-A
011121-0002-SA	AQUEOUS	CR-FAA-AD	11 SEP 90-A	-
011121-0002-SA	AQUEOUS	CR-FAA-AT	14 SEP 90-A	14 SEP 90-A

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Spiked	Concentration		AVG	Accuracy		Precision		
		DCS1	Measured DCS2		Average(%) DCS	Limits	(RPD) DCS	Limit	
Category: CR-FAA-AD Matrix: AQUEOUS QC Lot: 11 SEP 90-A Concentration Units: mg/L									

Chromium	0.02	0.0191	0.0188	0.0190	95	75-125	1.6	20
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Category: CR-FAA-AT Matrix: AQUEOUS QC Lot: 14 SEP 90-A Concentration Units: mg/L									
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Chromium	0.20	0.212	0.217	0.214	107	75-125	2.3	20
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Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
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Test: CR-FAA-AT
Matrix: AQUEOUS
QC Lot: 14 SEP 90-A QC Run: 14 SEP 90-A

Chromium	ND	mg/L	0.0050
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Test: CR-FAA-AT
Matrix: AQUEOUS
QC Lot: 14 SEP 90-A QC Run: 14 SEP 90-A

Chromium	ND	mg/L	0.0050
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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
011121-0001-SA	AQUEOUS	TOC-A	31 AUG 90-A	-
011121-0001-SA	AQUEOUS	TOX-A	18 SEP 90-A	-
011121-0001-SA	AQUEOUS	NO3-A	06 SEP 90-A	-
011121-0002-SA	AQUEOUS	TOC-A	31 AUG 90-A	-
011121-0002-SA	AQUEOUS	TOX-A	18 SEP 90-A	-
011121-0002-SA	AQUEOUS	NO3-A	06 SEP 90-A	-

DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Spiked	Concentration		AVG	Accuracy		Precision		
		DCS1	Measured DCS2		DCS	Average(%) Limits	(RPD) DCS Limit	DCS Limit	
Category: TOC-A Matrix: AQUEOUS QC Lot: 31 AUG 90-A Concentration Units: mg/L									
Total Organic Carbon	25	25.8	25.9	25.8	103	91-109	0.4	20	
Category: TOX-A Matrix: AQUEOUS QC Lot: 18 SEP 90-A Concentration Units: ug Cl/L									
Total Organic Halogen as Cl	100	95.9	93.9	94.9	95	80-120	2.1	20	
Category: NO3-A Matrix: AQUEOUS QC Lot: 06 SEP 90-A Concentration Units: mg/L									
Nitrate as N	5.4	5.33	5.44	5.38	100	91-109	2.0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Appendix

ENSECO ANALYTICAL SERVICES REQUEST FORM

11121-01

Special Handling

(Circle as appropriate and explain in record 5)

Site Type (circle one)

SW - Surface Water
 GW - Ground Water
 ME - Meteorological

LK - Lake
 ES - Estuary
 SP - Spring
 SS - Special Source

Hazardous material

KAFBC50210-2

Station Name

Field ID

USGS/WRD/NEW MEXICO SWMU

Field Office

Project

USGS

Collector

(505) 262-6678

Phone (FTS)

BILL DAM

File Deposition* (Circle one)

Q - WATSTORE
 X - Lab File

[Empty box for Laboratory Use Only]

For Laboratory Use Only

Sample identification

KAFBC50210-2

Station ID or Unique Number*

4.6.3.5.3.6.0.0.1

Project Account #

1990

Year*

08

Month*

28

Day*

0910

Time*

08

Month

28

Day

1.0.0.0

Time

NM

State Code*

0.3.5

District/ User Code*

0.0.1

County Code

Begin Date

Composite End Date

6 = GW
 9 = SW

Analysis level codes and schedules

1 = SPIKE
 5 = DUPLICATE
 9 = REGULAR

J = STORM
 9 = ROUTINE

6
 Sample Medium**

Geologic Unit

H or 9
 Analysis Status**

GS FIELD
 NONGE-LAB
 G
 Analysis Source**

9 = STABLE
 9
 Hydrologic Condition**

9
 Sample Type**

9
 Hydrologic Event**

PARAMETER:
 METHOD:

TOC
 SW 9060

TOX
 SW 9020

NO2+NO3
 E 353.2

DISSOLVED CHROMIUM
 SW 3005/SW 7191

TOTAL CHROMIUM
 SW 3020/SW 7191

PARAMETER:
 METHOD:

VOC
 SW 5030/SW 8040

APP. IX
 VOC
 SW 5030/SW 8240

APP. IX
 DIOXIN/FURANS
 SW 3520/SW 8280

APP. IX
 HERBICIDES
 SW 3520/SW 8150

PARAMETER:
 METHOD:

APPENDIX IX ICP, DISSOLVED
 Co, Cu, Fe, Pb, Mn, Mo, Ni, V, Zn
 SW 3005/SW 6070

APPENDIX IX ICP TOTAL
 Co, Cu, Fe, Pb, Mn, Mo, Ni, V, Zn
 SW 3010/SW 6070

PARAMETER:
 METHOD:

APP. IX SEMI-VOC
 SW 3520/SW 8270

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB SWMU PROJECT NO. 463536001 P.O. NO. _____

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date _____ Time _____

Relinquished by: (Signature) _____ Received by: (Signature) AIRBORNE EXPRESS Date 9/08/28 Time 1745

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date _____ Time _____

Relinquished by: (Signature) _____ Received at lab by: (Signature) _____ Date _____ Time _____

Relinquished from lab by: (Signature) _____ Received by: (Signature) _____ Date 8/29/90 Time 1030

Comments (Only 50 characters stored in NWIS)

Record 5 _____

Record 6 _____

Total number of sample bottles for this request: 7

SHIP TO:

Enseco-Rocky Mountain Analytical
 4955 Yarrow Street
 Arvada, CO 80002
 (303) 421-6611

ENSECO ANALYTICAL SERVICES REQUEST FORM

1121-02

Special Handling (Circle as appropriate and explain in record 5)

Hazardous material

Site Type (circle one)

SW - Surface Water
GW - Ground Water
 ME - Meteorological

LK - Lake
 ES - Estuary
 SP - Spring
 SS - Special Source
 (505) 262-6678
 Phone (FTS)
 BILL DAM

KAFB050108-2
 Station Name

Field ID
USGS/WRD/NEW MEXICO SWMU
 Field Office Project

USGS
 Collector

File Deposition* (Circle one)

Q - WATSTORE
 X - Lab File

Sample identification

For Laboratory Use Only

KAFB050108-2
 Station ID or Unique Number*

46.3.5.3.6.0.0.1
 Project Account #

1.9.90 08 28 1.5.3.0 08 28 1.6.0.0 NM 035 001
 Year* Month* Day* Time* Month Day Time State Code* District/ User Code* County Code
 Begin Date Composite End Date

6 = GW
 9 = SW

Analysis level codes and schedules

1 = SPIKE
 5 = DUPLICATE
 9 = REGULAR
 J = STORM
 9 = ROUTINE

6 6 H or 9 G 9 9 9
 Sample Medium** Geologic Unit Analysis Status** Analysis Source** Hydrologic Condition** Sample Type** Hydrologic Event**

PARAMETER: TOC TOX NO2+NO3 DISSOLVED CHROMIUM TOTAL CHROMIUM
 METHOD: SW 9060 SW 9020 E 353.2 SW 3005/SW 7191 SW 3020/SW 7191
~~PARAMETER: VOC~~
~~METHOD: SW 5050/SW 8010 SW 8000/SW 8240 SW 3320/SW 8280 SW 3320/SW 8150~~
~~PARAMETER: APPENDIX IX ICP DISSOLVED~~
~~METHOD: Ca, Cu, Fe, Pb, Mn, TiO, Ni, V, Zn APPENDIX IX ICP/TOTAL~~
~~PARAMETER: APPENDIX IX SEMI-VOC~~
~~METHOD: SW 3005/SW 6010 SW 3010/SW 6010~~

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB SWMU PROJECT NO. 463536001 P.O. NO. _____

Relinquished by: (Signature) [Signature] Received by: (Signature) AIRBORNE EXPRESS Date 900828 Time 1745
 Relinquished by: (Signature) _____ Received by: (Signature) _____ Date _____ Time _____
 Relinquished by: (Signature) _____ Received at lab by: (Signature) Joseph A. Mayo Date 8/29/90 Time 01030
 Relinquished from lab by: (Signature) _____ Received by: (Signature) _____ Date _____ Time _____

Comments (Only 50 characters stored in NWIS)

Record 5 _____
 Record 6 _____

Total number of sample bottles for this request: 4

SHIP TO:

Enseco-Rocky Mountain Analytical
 4955 Yarrow Street
 Arvada, CO 80002
 (303) 421-6611

ATTENTION: THOMPSON, BREYER, OR MCDEVITT

ENSECO ANALYTICAL SERVICES REQUEST FORM

11121-03

Special Handling (Circle as appropriate and explain in record 5)
 Hazardous material

Site Type (circle one)
 SW - Surface Water LK - Lake
 GW - Ground Water ES - Estuary
 ME - Meteorological SP - Spring
 SS - Special Source

Station Name: KAFB050211-2 Field Office: USGS/WRD/NEW MEXICO SWMU Project: USGS Collector: (505)262-6678
 Phone (FTS): BILL DAM

File Deposition* (Circle one)
 Q - WATSTORE
 X - Lab File

Sample identification
AMBIENT BLANK
KAFB050211-2 463536001
 Station ID or Unique Number* Project Account #

Year* 1990 Month* 08 Day* 28 Time* 0900 Month Day Time State Code* NM District/User Code* 035 County Code 001

Begin Date Composite End Date

Analysis level codes and schedules

6 = ~~GW~~ 9 = ~~SW~~ H or 9 ~~GS FIELD~~ ~~NRNGE-LAB~~ 9 = ~~STABLE~~ 1 = ~~SPIKE~~ 5 = ~~DUPLICATE~~ 9 = ~~REGULAR~~ J = ~~STORM~~ 9 = ~~ROUTINE~~

Sample Medium** Geologic Unit Analysis Status** Analysis Source** Hydrologic Condition** Sample Type** Hydrologic Event**

PARAMETER: ~~TOC~~ ~~TOX~~ ~~NO2+NO3~~ ~~DISSOLVED CHROMIUM~~ ~~TOTAL CHROMIUM~~
 METHOD: ~~SW9060~~ ~~SW9020~~ ~~E353.2~~ ~~SW3005/SW7141~~ ~~SW3020/SW7141~~

PARAMETER: ~~VOC~~ APP. IX VOC ~~DIKIN-FURANS~~ ~~HERBICIDES~~
 METHOD: ~~SW5030/SW8010~~ SW5030/SW8240 ~~SW3520/SW8280~~ ~~SW3520/SW8150~~

PARAMETER: ~~APPENDIX IX ICP DISSOLVED CO, CU, FE, PB, MN, MO, NI, V, ZN~~
 METHOD: ~~SW3005/SW6010~~ ~~APPENDIX IX ICP TOTAL CO, CU, FE, PB, MN, MO, NI, V, ZN~~ ~~SW3010/SW6010~~

PARAMETER: ~~APP. IX SEMI-VOC~~
 METHOD: ~~SW3520/SW8270~~

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB SWMU PROJECT NO. 463536001 P.O. NO. _____

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
<u>Kim [Signature]</u>	<u>AIRBORNE EXPRESS</u>	<u>900828</u>	<u>1745</u>
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received at lab by: (Signature)	Date	Time
	<u>Joseph [Signature]</u>	<u>8/29/90</u>	<u>1030</u>
Relinquished from lab by: (Signature)	Received by: (Signature)	Date	Time

Comments (Only 50 characters stored in NWIS)

Record 5 AMBIENT CONDITION BLANK

Record 6 _____

Total number of sample bottles for this request: 3 SHIP TO:

Enseco-Rocky Mountain Analytical
 4955 Yarrow Street
 Arvada, CO 80002
 (303) 421-6611
 ATTENTION: THOMPSON, BREYER, OR MCDEVITT

ENSECO ANALYTICAL SERVICES REQUEST FORM

1121 - 04

Special Handling

(Circle as appropriate and explain in record 5)

Site Type (circle one)

SW - Surface Water
GW - Ground Water
ME - Meteorological

LK - Lake
ES - Estuary
SP - Spring
SS - Special Source

Hazardous material

Station Name KAFB050212-2

Field ID USGS/WRD/NEW MEXICO SWMU
Field Office USGS Project USGS

Collector (505) 262-6678
Phone (FTS) BILL DAM

File Deposition*

(Circle one)
Q - WATSTORE
X - Lab File

For Laboratory Use Only

Sample identification

TRIP BLANK
Station ID or Unique Number* KAFB050212-2 Project Account # 463536001

Begin Date: Year* 90 Month* 08 Day* 28 Time* 11:30
Composite End Date: Month — Day — Time — State Code* NM District/ User Code* 035 County Code 001

6 = GW
9 = SW

Analysis level codes and schedules

1 = SPIKE
5 = DUPLICATE
9 = REGULAR
J = STORM
9 = ROUTINE

Sample Medium** 6 Geologic Unit — Analysis Status** H or 9 Analysis Source** G Hydrologic Condition** 9 Sample Type** 9 Hydrologic Event** 9

PARAMETER: ~~TOC~~ ~~TOX~~ ~~NO2+NO3~~ ~~DISSOLVED CHROMIUM~~ ~~TOTAL CHROMIUM~~
METHOD: ~~SW 9060~~ ~~SW 9020~~ ~~E 353.2~~ ~~SW 3005/SW 7191~~ ~~SW 3020/SW 7191~~
PARAMETER: ~~VOC~~ APP. IX VOC ~~DIOXIN FORANS~~ ~~HERBICIDES~~
METHOD: ~~SW 5030/SW 6010~~ SW 5030/SW 8240 ~~SW 3520/SW 8280~~ ~~SW 3520/SW 8150~~
PARAMETER: ~~APPENDIX IX ICP DISSOLVED~~ ~~APPENDIX IX ICP TOTAL~~
METHOD: ~~Co, Cu, Fe, Pb, Mn, Mo, Ni, V, Zn~~ ~~SW 3005/SW 6010~~ ~~SW 3010/SW 6010~~
PARAMETER: ~~APP. IX SEMI-VOC~~
METHOD: ~~SW 3520/SW 8270~~

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB SWMU PROJECT NO. 463536001 P.O. NO. —

Relinquished by: (Signature) [Signature] Received by: (Signature) AIRBORNE EXPRESS Date 900828 Time 1745
Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date — Time —
Relinquished by: (Signature) [Signature] Received at lab by: (Signature) [Signature] Date 8/29/90 Time 1030
Relinquished from lab by: (Signature) [Signature] Received by: (Signature) [Signature] Date — Time —

Comments (Only 50 characters stored in NWIS)

Record 5 TRIP BLANK
Record 6 —

Total number of sample bottles for this request: 3

SHIP TO:
Enseco-Rocky Mountain Analytical
4955 Yarrow Street
Arvada, CO 80002
(303) 421-6611

ATTENTION: THOMPSON, BREYER, OR MCDEVITT