

6 of 10
B

Rocky Mountain
Analytical Laboratory

ENTERED

ANALYTICAL RESULTS
FOR
U.S. GEOLOGICAL SURVEY
ENSECO-RMAL NO. 013888



MARCH 30, 1991

Reviewed by:



Randall Thompson



Lindsay Breyer

Enseco Incorporated
4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Fax: 303/431-7171

KAFB1112



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

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		Received
			Date	Time	
013888-0001-SA	KAFB061005-2	AQUEOUS	06 MAR 91	13:05	07 MAR 91
013888-0002-SA	KAFB061006-2	AQUEOUS	06 MAR 91	14:12	07 MAR 91
013888-0003-SA	KAFB090211-2	AQUEOUS	06 MAR 91	17:25	07 MAR 91

ANALYTICAL TEST REQUESTS
for
U.S. Geological Survey

Lab ID: 013888	Group Code	Analysis Description	Custom Test?
0001 - 0002	A	Chromium, Furnace AA	N
		Chromium, Furnace AA (Total)	N
		Prep - Total Metals, ICP	N
		Chromium VI (Dissolved)	N
		Chromium VI (Total)	N
		Nitrate Plus Nitrite	N
		Total Organic Halogen (TOX)	N
		Total Organic Carbon (TOC)	N
0003	B	Chromium, Furnace AA	N
		Chromium, Furnace AA (Total)	N
		Prep - Total Metals, ICP	N
		Chromium VI (Dissolved)	N
		Chromium VI (Total)	N
		Nitrate Plus Nitrite	N
		Total Organic Halogen (TOX)	N
		Total Organic Carbon (TOC)	N
		Halogenated Volatile Organics	N
Halogenated Volatile Organics-2nd Column Analysis	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.

Halogenated Volatile Organics

Method 8010

Client Name: U.S. Geological Survey

Client ID: KAFB090211-2

Lab ID: 013888-0003-SA

Matrix: AQUEOUS

Authorized: 07 MAR 91

Sampled: 06 MAR 91

Prepared: NA

Received: 07 MAR 91

Analyzed: 11 MAR 91

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	1.1
Bromomethane	ND	ug/L	6.0
Dichlorodifluoromethane	ND	ug/L	9.0
Vinyl chloride	ND	ug/L	0.60
Chloroethane	ND	ug/L	3.0
Methylene chloride	ND	ug/L	2.0
Trichlorofluoromethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.70
1,1-Dichloroethane	ND	ug/L	0.40
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.30
1,2-Dichloroethane	ND	ug/L	0.50
1,1,1-Trichloroethane	ND	ug/L	0.20
Carbon tetrachloride	ND	ug/L	0.60
Bromodichloromethane	ND	ug/L	0.50
1,2-Dichloropropane	ND	ug/L	0.50
trans-1,3-Dichloropropene	ND	ug/L	2.0
Trichloroethene	ND	ug/L	0.60
Dibromochloromethane	ND	ug/L	0.60
1,1,2-Trichloroethane	ND	ug/L	0.20
2-Chloroethyl vinyl ether	ND	ug/L	5.5
Bromoform	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.4
Tetrachloroethene	ND	ug/L	0.40
Chlorobenzene	ND	ug/L	1.2
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	0.50
1,4-Dichlorobenzene	ND	ug/L	0.50
Benzyl chloride	ND	ug/L	6.8
Bromobenzene	ND	ug/L	5.0
bis(2-Chloroisopropyl)- ether	ND	ug/L	10
1-Chlorohexane	ND	ug/L	5.0
4-Chlorotoluene	ND	ug/L	23
Dibromomethane	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0

Surrogate	Recovery		
Bromochloromethane	94	%	--

ND = Not detected
 NA = Not applicable

Reported By: Tina Pieper

Approved By: Jeff Lowry

Metals

Total Metals

Client Name: U.S. Geological Survey

Client ID: KAFB061005-2

Lab ID: 013888-0001-SA

Matrix: AQUEOUS

Authorized: 07 MAR 91

Sampled: 06 MAR 91

Prepared: See Below

Received: 07 MAR 91

Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	07 MAR 91
Chromium	0.053	mg/L	0.0010	7191	25 MAR 91	26 MAR 91

Smith

ND = Not detected
 NA = Not applicable

Reported By: David Patterson

Approved By: Dave Roberts

Metals

Total Metals

Client Name: U.S. Geological Survey
 Client ID: KAFB061006-2
 Lab ID: 013888-0002-SA
 Matrix: AQUEOUS
 Authorized: 07 MAR 91

Sampled: 06 MAR 91
 Prepared: See Below

Received: 07 MAR 91
 Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	07 MAR 91
Chromium	0.0040	mg/L	0.0010	7191	25 MAR 91	26 MAR 91

Equipment blank

ND = Not detected
 NA = Not applicable

Reported By: David Patterson

Approved By: Dave Roberts

Metals**Total Metals**

Client Name: U.S. Geological Survey

Client ID: KAFB090211-2

Lab ID: 013888-0003-SA

Matrix: AQUEOUS

Authorized: 07 MAR 91

Sampled: 06 MAR 91

Prepared: See Below

Received: 07 MAR 91

Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	07 MAR 91
Chromium	0.024	mg/L	0.0010	7191	25 MAR 91	26 MAR 91

ND = Not detected
NA = Not applicable

Reported By: David Patterson

Approved By: Dave Roberts

Metals

Dissolved Metals

Client Name: U.S. Geological Survey
Client ID: KAFB061005-2
Lab ID: 013888-0001-SA
Matrix: AQUEOUS
Authorized: 07 MAR 91

Sampled: 06 MAR 91
Prepared: See Below

Received: 07 MAR 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	07 MAR 91
Chromium	0.0034	mg/L	0.0010	7191	NA	22 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones

Approved By: Dave Roberts

Metals

Dissolved Metals

Client Name: U.S. Geological Survey

Client ID: KAFB061006-2

Lab ID: 013888-0002-SA

Matrix: AQUEOUS

Authorized: 07 MAR 91

Sampled: 06 MAR 91

Prepared: See Below

Received: 07 MAR 91

Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	07 MAR 91
Chromium	0.0020	mg/L	0.0010	7191	NA	22 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones

Approved By: Dave Roberts

Metals**Dissolved Metals**

Client Name: U.S. Geological Survey

Client ID: KAFB090211-2

Lab ID: 013888-0003-SA

Matrix: AQUEOUS

Authorized: 07 MAR 91

Sampled: 06 MAR 91

Prepared: See Below

Received: 07 MAR 91

Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	07 MAR 91
Chromium	0.0032	mg/L	0.0010	7191	NA	22 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones

Approved By: Dave Roberts

General Inorganics



Client Name: U.S. Geological Survey
Client ID: KAFB061005-2
Lab ID: 013888-0001-SA
Matrix: AQUEOUS
Authorized: 07 MAR 91

Sampled: 06 MAR 91
Prepared: See Below

Received: 07 MAR 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Nitrate plus Nitrite	23.0	mg/L	2.5	353.2	NA	09 MAR 91
Total Organic Carbon	0.69	mg/L	0.50	9060	NA	13 MAR 91
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	19 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Linda Sullivan

Approved By: Roxanne Sullivan

General Inorganics

Client Name: U.S. Geological Survey
Client ID: KAFB061006-2
Lab ID: 013888-0002-SA
Matrix: AQUEOUS
Authorized: 07 MAR 91

Sampled: 06 MAR 91
Prepared: See Below

Received: 07 MAR 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Nitrate plus Nitrite	ND	mg/L	0.050	353.2	NA	09 MAR 91
Total Organic Carbon	4.4	mg/L	0.50	9060	NA	13 MAR 91
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	19 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Linda Sullivan

Approved By: Roxanne Sullivan

General Inorganics



Client Name: U.S. Geological Survey
Client ID: KAFB090211-2
Lab ID: 013888-0003-SA
Matrix: AQUEOUS
Authorized: 07 MAR 91

Sampled: 06 MAR 91
Prepared: See Below

Received: 07 MAR 91
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Nitrate plus Nitrite	1.4	mg/L	0.10	353.2	NA	09 MAR 91
Total Organic Carbon	0.82	mg/L	0.50	9060	NA	13 MAR 91
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	19 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Linda Sullivan

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

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013888-0003-SA	AQUEOUS	601-A	10 MAR 91-F	10 MAR 91-F

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)	
		DCS1	DCS2		DCS	Limits	DCS	Limit
Category: 601-A								
Matrix: AQUEOUS								
QC Lot: 10 MAR 91-F								
Concentration Units: ug/L								
1,1-Dichloroethane	5.0	4.16	4.24	4.20	84	80-130	1.9	20
Chloroform	5.0	4.46	4.34	4.40	88	80-120	2.7	20
Bromodichloromethane	10	8.35	7.55	7.95	80	80-120	10	20
Trichloroethene	5.0	4.44	4.18	4.31	86	70-120	6.0	20
Chlorobenzene	5.0	4.37	4.48	4.42	89	80-120	2.5	20

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

SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration		Accuracy(%)	
	Spiked	Measured	SCS	Limits
Category: 601-A				
Matrix: AQUEOUS				
QC Lot: 10 MAR 91-F QC Run: 10 MAR 91-F				
Concentration Units: ug/L				
Bromochloromethane	5.00	4.39	88	20-160

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

METHOD BLANK REPORT
Volatile Organics by GC

Analyte	Result	Units	Reporting Limit
Test: 601-AFIR-A			
Matrix: AQUEOUS			
QC Lot: 10 MAR 91-F	QC Run: 10 MAR 91-F		
Chloromethane	ND	ug/L	1.1
Bromomethane	ND	ug/L	6.0
Dichlorodifluoromethane	ND	ug/L	9.0
Vinyl chloride	ND	ug/L	0.60
Chloroethane	ND	ug/L	3.0
Methylene chloride	ND	ug/L	2.0
Trichlorofluoromethane	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	0.70
1,1-Dichloroethane	ND	ug/L	0.40
trans-1,2-Dichloroethene	ND	ug/L	0.50
Chloroform	ND	ug/L	0.30
1,2-Dichloroethane	ND	ug/L	0.50
1,1,1-Trichloroethane	ND	ug/L	0.20
Carbon tetrachloride	ND	ug/L	0.60
Bromodichloromethane	ND	ug/L	0.50
1,2-Dichloropropane	ND	ug/L	0.50
trans-1,3-Dichloropropene	ND	ug/L	2.0
Trichloroethene	ND	ug/L	0.60
Dibromochloromethane	ND	ug/L	0.60
1,1,2-Trichloroethane	ND	ug/L	0.20
2-Chloroethyl vinyl ether	ND	ug/L	5.5
Bromoform	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.4
Tetrachloroethene	ND	ug/L	0.40
Chlorobenzene	ND	ug/L	1.2
1,3-Dichlorobenzene	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	0.50
1,4-Dichlorobenzene	ND	ug/L	0.50
Benzyl chloride	ND	ug/L	6.8
Bromobenzene	ND	ug/L	5.0
bis(2-Chloroisopropyl)- ether	ND	ug/L	10
1-Chlorohexane	ND	ug/L	5.0
4-Chlorotoluene	ND	ug/L	23
Dibromomethane	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,2,3-Trichloropropane	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)
013888-0001-SA	AQUEOUS	CR-FAA-AD	22 MAR 91-A	-
013888-0001-SA	AQUEOUS	CR-FAA-AT	25 MAR 91-R	25 MAR 91-R
013888-0001-SA	AQUEOUS	CR6-A	07 MAR 91-A	-
013888-0001-SA	AQUEOUS	CR6-AT	07 MAR 91-A	-
013888-0002-SA	AQUEOUS	CR-FAA-AD	22 MAR 91-A	-
013888-0002-SA	AQUEOUS	CR-FAA-AT	25 MAR 91-R	25 MAR 91-R
013888-0002-SA	AQUEOUS	CR6-A	07 MAR 91-A	-
013888-0002-SA	AQUEOUS	CR6-AT	07 MAR 91-A	-
013888-0003-SA	AQUEOUS	CR-FAA-AD	22 MAR 91-A	-
013888-0003-SA	AQUEOUS	CR-FAA-AT	25 MAR 91-R	25 MAR 91-R
013888-0003-SA	AQUEOUS	CR6-A	07 MAR 91-A	-
013888-0003-SA	AQUEOUS	CR6-AT	07 MAR 91-A	-

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)		
		DCS1	DCS2		DCS	Limits	DCS	Limit	
Category: CR-FAA-AD Matrix: AQUEOUS QC Lot: 22 MAR 91-A Concentration Units: mg/L									
Chromium	0.02	0.0237	0.0234	0.0236	118	75-125	1.3	20	
Category: CR-FAA-AT Matrix: AQUEOUS QC Lot: 25 MAR 91-R Concentration Units: mg/L									
Chromium	0.20	0.208	0.196	0.202	101	75-125	5.9	20	
Category: CR6-A Matrix: AQUEOUS QC Lot: 07 MAR 91-A Concentration Units: mg/L									
Chromium (VI)	0.05	0.0508	0.0521	0.0514	103	75-125	2.5	20	
Category: CR6-AT Matrix: AQUEOUS QC Lot: 07 MAR 91-A Concentration Units: mg/L									
Chromium (VI)	0.05	0.0508	0.0521	0.0514	103	75-125	2.5	20	

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
Test: CR-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 25 MAR 91-R QC Run: 25 MAR 91-R			
Chromium	0.0020	mg/L	0.0010
Test: CR-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 25 MAR 91-R QC Run: 25 MAR 91-R			
Chromium	0.0020	mg/L	0.0010

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)
013888-0001-SA	AQUEOUS	NO3-A	09 MAR 91-A	-
013888-0001-SA	AQUEOUS	TOX-A	19 MAR 91-A	-
013888-0001-SA	AQUEOUS	TOC-A	13 MAR 91-M	-
013888-0002-SA	AQUEOUS	NO3-A	09 MAR 91-A	-
013888-0002-SA	AQUEOUS	TOX-A	19 MAR 91-A	-
013888-0002-SA	AQUEOUS	TOC-A	13 MAR 91-M	-
013888-0003-SA	AQUEOUS	NO3-A	09 MAR 91-A	-
013888-0003-SA	AQUEOUS	TOX-A	19 MAR 91-A	-
013888-0003-SA	AQUEOUS	TOC-A	13 MAR 91-M	-

DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Concentration Measured		AVG	Accuracy Average(%)		Precision (RPD)		
		DCS1	DCS2		DCS	Limits	DCS	Limit	
Category: NO3-A Matrix: AQUEOUS QC Lot: 09 MAR 91-A Concentration Units: mg/L									
Nitrate as N	5.4	5.12	5.45	5.28	98	91-109	6.2	10	
Category: TOX-A Matrix: AQUEOUS QC Lot: 19 MAR 91-A Concentration Units: ug Cl/L									
Total Organic Halogen as Cl	100	90.3	87.6	89.0	89	80-120	3.0	20	
Category: TOC-A Matrix: AQUEOUS QC Lot: 13 MAR 91-M Concentration Units: mg/L									
Total Organic Carbon	25.0	25.9	26.0	26.0	104	91-109	0.4	20	

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

ENSECO ANALYTICAL SERVICES REQUEST FORM

13888 -01

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

azardous material

Site Type (circle one)

SW - Surface Water
 (GW) - Ground Water
 ME - Meteorological

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

KAFB 061005-2

Station Name

Field ID
 USGS/WRD/NEW MEX
 Field Office

KIRTLAND AFB
 IRP-SWMU'S
 Project

BILL DAM
 Collector

(505) 262-5341
 Phone (FTS)

File Deposition*

Sample identification

Circle one)

Q - WATSTORE

X - Lab File

[Empty box for Laboratory Use Only]

For Laboratory Use Only

KAFB 061005-2

Station ID or Unique Number*

463 53 600 1

Project Account #

1 9 9 1
 Year*

0 3
 Month*

0 6
 Day*

1 3 0 5
 Time*

0 3
 Month

0 6
 Day

1 3 1 0
 Time

N M
 State Code*

0 3 5
 District/
 User Code*

0 0 1
 County Code

Begin Date

Composite End Date

Analysis level codes and schedules

	6 Sample Medium**	Geologic Unit	(H) or 9 Analysis Status**	9 Analysis Source**	Hydrologic Condition**	9 Sample Type**	9 Hydrologic Event**
PARAMETER:	CHROMIUM, TOTAL		CHROMIUM, DISS	CHROMIUM HEXAVALENT TOTAL	CHROMIUM HEXAVALENT DISSOLVED		NITRATE + NITRITE
METHOD:	SW3020/SW7191		SW3005/SW7191	SW7196	SW7196		E353.2
PARAMETER:	URANIUM GROSS ALPHA & GROSS BETA			NOX	TDC, TOX		NITROGLYCERIN/PETN
METHOD:	A711B, E900			SW5050/SW8010	SW7060, SW9020 EKS, I		HSAT/HAT/A
PARAMETER:							
METHOD:							

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB-IRP, SWMU'S PROJECT NO. 463536001 P.O. NO. _____

Relinquished by: (Signature) Mike Royal Received by: (Signature) _____ Date 3/6/91 Time 1830

Relinquished by: (Signature) _____ Received by: (Signature) Rmax B Mason Date 3/7/91 Time 0800

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

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

Comments (Only 50 characters stored in NWIS)

Record 5 WELL AT SW CNR OF GOLF COURSE POND.

Record 6 _____

Total number of sample bottles for this request: 6

SHIP TO:

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

ENSECO ANALYTICAL SERVICES REQUEST FORM

13888-02

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

azardous material
EQUIPMENT BLANK
KAFB061006-2

Station Name

Site Type (circle one)

SW - Surface Water
GW - Ground Water
ME - Meteorological

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

Field ID
USGS/WRD/NEW MEX
Field Office

Project
KIRTLAND AFB
IRP-SWMU'S

Collector
BILL DAM

Phone (FTS)
(505) 262-5341

File Deposition*

Circle one)
Q - WATSTORE
X - Lab File

[Empty box for Laboratory Use Only]

For Laboratory Use Only

Sample identification

KAFB061006-2

Station ID or Unique Number*

463536001

Project Account #

1991 03 06 1412 N M 035 001
Year* Month* Day* Time* Month Day Time State Code* District/ User Code* County Code

Begin Date

Composite End Date

Analysis level codes and schedules

PARAMETER:	6 Sample Medium**	Geologic Unit	(H) or 9 Analysis Status**	9 Analysis Source**	Hydrologic Condition**	9 Sample Type**	9 Hydrologic Event**
PARAMETER:	CHROMIUM, TOTAL		CHROMIUM, DISS	CHROMIUM HEXAVALENT TOTAL	CHROMIUM HEXAVALENT DISSOLVED		NITRATE + NITRITE
METHOD:	SW3020/SW7191		SW3005/SW7191	SW7196	SW7196		E353.2
PARAMETER:	URANIUM GROSS ALPHA & GROSS BETA		VOX	SW5030/SW8010	TDC, TOX		MICROGLYCERINE PETH
METHOD:	A711B, E900				SW7060, SW9020 E915.1		USATHAMA
PARAMETER:							
METHOD:							

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB-IRP, SWMU'S PROJECT NO. 463536001 P.O. NO.

Relinquished by: (Signature) *Mike Royal* Received by: (Signature) FEDERAL EXPRESS Date 3/6/91 Time 1830

Relinquished by: (Signature) Received by: (Signature) *Rmad B Mason* Date 3/7/91 Time 0800

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

Relinquished from lab by: (Signature) Received by: (Signature) Date Time

Comments (Only 50 characters stored in NWIS)

Record 5 EQUIPMENT BLANK

Record 6

Total number of sample bottles for this request: 6

SHIP TO:

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

ENSECO ANALYTICAL SERVICES REQUEST FORM

13888 -03

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

KAFB 90211-2
 Station Name

Field ID
 USGS/WRD/NEW MEX
 Field Office

KIRTLAND AFB
 IRP-SWMU'S
 Project

BILL DAM
 Collector

(505) 262-5341
 Phone (FTS)

File Deposition*

Sample identification

(Circle one)

Q - WATSTORE
 X - Lab File

For Laboratory Use Only

KAFB 090211-2
 Station ID or Unique Number*

463.53.600.1
 Project Account #

1.9.91 03 06 1725 03 06 1735 N.M. 035 0.0.1
 Year* Month* Day* Time* Month Day Time State Code* District/ User Code* County Code
 Begin Date Composite End Date

Analysis level codes and schedules

PARAMETER:	6 Sample Medium**	(H) or 9 Geologic Unit	9 Analysis Status**	9 Analysis Source	9 Hydrologic Condition	9 Sample Type**	9 Hydrologic Event**
METHOD:	CHROMIUM, TOTAL SW3020/SW7191	CHROMIUM, DISS SW3005/SW7191	CHROMIUM HEXAVALENT TOTAL SW7196	CHROMIUM HEXAVALENT DISSOLVED SW7196	NITRATE + NITRITE E353.2		
PARAMETER:	URANIUM GROSS ALPHA & GROSS BETA		VOX	TDC, TOX	NITROGLYCERINE PETN		
METHOD:	A711B, E700		SW5030/SW8010	SW460, SW9020 EHS.1	USATHAMA		
PARAMETER:							
METHOD:							

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB-IRP, SWMU'S PROJECT NO. 463536001 P.O. NO.

Relinquished by: (Signature) Miche Rozhal	Received by: (Signature) FEDERAL EXPRESS	Date 3/6/91	Time 1830
Relinquished by: (Signature)	Received by: (Signature) Rmael B Maed	Date 3/7/91	Time 0800
Relinquished by: (Signature)	Received at lab by: (Signature)	Date	Time
Relinquished from lab by: (Signature)	Received by: (Signature)	Date	Time

Comments (Only 50 characters stored in NWIS)

Record 5 WELL AT TIJERAS ARROYO DOWNSTREAM

Record 6

Total number of sample bottles for this request: 9

SHIP TO:

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