Rocky Mountain
Analytical Laboratory

ENTERED

ANALYTICAL RESULTS

FOR

U.S. GEOLOGICAL SURVEY

ENSECO-RMAL NO. 013631

MARCH 30, 1991

Enseco

Reviewed by:

Randall Thompson

Lindsay Breyer

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

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:

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

The holding time was exceeded for the hexavalent chromium analyses of sample 013631-0001 by fifteen minutes.

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	Sampled Time	Received Date
013631-0001-SA	DI-CF-SYSTEM-LINE	AQUEOUS	19 FEB 91	15:15	20 FEB 91

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ANALYTICAL TEST REQUESTS
for
U.S. Geological Survey

Lab ID: 013631	Group Code	Analysis Description	Custom Test?
0001	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
		Uranium, Natural	N
		Gross Alpha & Beta	N
		Halogenated Volatile Organics-2nd Column Analysis	N
		Halogenated Volatile Organics	N
		Total Organic Carbon (TOC)	N
		Total Organic Halogen (TOX)	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.

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Halogenated Volatile Organics

Method 8010

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: NA Analyzed: 27 FEB 91

Parameter	Result	Units	Reporting Limit	
Chloromethane	ND	ug/L	1.1	T
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	1.0	ug/L	2.0	J
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	0.61	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	0.77	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	77	%	--

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper Approved By: Jeff Lowry

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Halogenated Volatile Organics (CONT.)

Method 8010

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: NA Analyzed: 27 FEB 91

Note T : Preferred values unless footnoted on secondary column test.

Note J : Result is detected below the reporting limit or is an estimated concentration.

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper Approved By: Jeff Lowry

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Halogenated Volatile Organics-2nd Column Analysis

Method 8010

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: NA Analyzed: 27 FEB 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	1.3	ug/L	2.0	J
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	0.95	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	1.4	ug/L	0.50	L
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	L
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	
1,2,3-Trichloropropane	ND	ug/L	5.0	

Surrogate	Recovery		
Bromochloromethane	103	%	--

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper Approved By: Jeff Lowry

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Halogenated Volatile Organics-2nd Column Analysis (CONT.)

Method 8010

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: NA Analyzed: 27 FEB 91

Note J : Result is detected below the reporting limit or is an estimated concentration.

Note L : These components are not separable using this method and are therefore quantified together.

ND = Not detected
NA = Not applicable

Reported By: Tina Pieper Approved By: Jeff Lowry

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Metals

Total Metals

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	20 FEB 91
Chromium	0.0022	mg/L	0.0010	7191	26 FEB 91	06 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Frank Carman Approved By: Roxanne Sullivan

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Metals

Dissolved Metals

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	20 FEB 91
Chromium	ND	mg/L	0.0010	7191	NA	06 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Frank Carman Approved By: Roxanne Sullivan

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General Inorganics

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: See Below 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	25 FEB 91
Total Organic Carbon	ND	mg/L	0.50	9060	NA	25 FEB 91
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	28 FEB 91

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Roxanne Sullivan

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Radiochemistry

Client Name: U.S. Geological Survey
Client ID: DI-CF-SYSTEM-LINE
Lab ID: 013631-0001-SA
Matrix: AQUEOUS Sampled: 19 FEB 91 Received: 20 FEB 91
Authorized: 20 FEB 91 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Gross Alpha	4.1	pCi/L	+/- 2.7	900.0	NA	01 MAR 91
Gross Beta	3.9	pCi/L	+/- 3.3	900.0	NA	01 MAR 91
Uranium, Natural	ND	mg/L	0.002	ASTM D2907-70T	NA	29 MAR 91

ND = Not detected
NA = Not applicable

Reported By: Toni Stovall Approved By: Toni Stovall

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).

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

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.

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013631-0001-SA	AQUEOUS	601-A	26 FEB 91-F	26 FEB 91-F
013631-0001-SA	AQUEOUS	601-A	26 FEB 91-F	26 FEB 91-F

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: 601-A Matrix: AQUEOUS QC Lot: 26 FEB 91-F Concentration Units: ug/L								
1,1-Dichloroethane	5.0	4.90	4.81	4.86	97	80-130	1.9	20
Chloroform	5.0	5.15	4.98	5.06	101	80-120	3.4	20
Bromodichloromethane	10	8.72	8.61	8.66	87	80-120	1.3	20
Trichloroethene	5.0	5.51	5.23	5.37	107	70-120	5.2	20
Chlorobenzene	5.0	4.39	4.79	4.59	92	80-120	8.7	20

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

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SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC

Analyte	Concentration Spiked	Measured	Accuracy(%) SCS	Limits
Category: 601-A				
Matrix: AQUEOUS				
QC Lot: 26 FEB 91-F QC Run: 26 FEB 91-F				
Concentration Units: ug/L				
Bromochloromethane	5.00	4.16	83	20-160

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

METHOD BLANK REPORT
Volatile Organics by GC

Test: 601-AFIR-A
Matrix: AQUEOUS
QC Lot: 26 FEB 91-F QC Run: 26 FEB 91-F

Analyte	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

METHOD BLANK REPORT
Volatile Organics by GC (cont.)

Test: 601-AFIR-2-A
Matrix: AQUEOUS
QC Lot: 26 FEB 91-F QC Run: 26 FEB 91-F

Analyte	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

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
013631-0001-SA	AQUEOUS	CR-FAA-AD	06 MAR 91-A	-
013631-0001-SA	AQUEOUS	CR-FAA-AT	26 FEB 91-B	26 FEB 91-B
013631-0001-SA	AQUEOUS	CR6-A	20 FEB 91-E	-
013631-0001-SA	AQUEOUS	CR6-AT	20 FEB 91-E	-

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: CR-FAA-AD Matrix: AQUEOUS QC Lot: 06 MAR 91-A Concentration Units: mg/L								
Chromium	0.200	0.184	0.205	0.194	97	75-125	11	20
Category: CR-FAA-AT Matrix: AQUEOUS QC Lot: 26 FEB 91-B Concentration Units: mg/L								
Chromium	0.2	0.209	0.201	0.205	103	75-125	3.9	20
Category: CR6-A Matrix: AQUEOUS QC Lot: 20 FEB 91-E Concentration Units: mg/L								
Chromium (VI)	0.05	0.0476	0.0496	0.0486	97	75-125	4.1	20
Category: CR6-AT Matrix: AQUEOUS QC Lot: 20 FEB 91-E Concentration Units: mg/L								
Chromium (VI)	0.05	0.0476	0.0496	0.0486	97	75-125	4.1	20

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

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METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: CR-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 26 FEB 91-B QC Run: 26 FEB 91-B			
Chromium	ND	mg/L	0.0010

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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)
013631-0001-SA	AQUEOUS	NO3-A	25 FEB 91-B	-
013631-0001-SA	AQUEOUS	TOC-A	25 FEB 91-M	-
013631-0001-SA	AQUEOUS	TOX-A	28 FEB 91-A	-

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A Corning Company

DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: NO3-A Matrix: AQUEOUS QC Lot: 25 FEB 91-B Concentration Units: mg/L								
Nitrate as N	5.4	5.68	5.54	5.61	104	91-109	2.5	10
Category: TOC-A Matrix: AQUEOUS QC Lot: 25 FEB 91-M Concentration Units: mg/L								
Total Organic Carbon	25.0	25.6	25.6	25.6	102	91-109	0.0	20
Category: TOX-A Matrix: AQUEOUS QC Lot: 28 FEB 91-A Concentration Units: ug Cl/L								
Total Organic Halogen as Cl	100	101	99.7	100	100	80-120	1.3	20

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

ENSECO ANALYTICAL SERVICES REQUEST FORM

13631-01

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

lazardous material

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

Station Name	Field ID / Field Office	Project	Collector	Phone (FTS)
DI-CF-SYSTEM-LINE, ALBUQUERQUE, SDO, USGS, WRD	USGS/WRD/NEW MEXICO	KIRTLAND AFB IRP	MIKO ROYBAL & KIM ONG	(505)262-5344 (505)262-5327

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

For Laboratory Use Only

Sample identification

Station ID or Unique Number*	Project Account #
D.I.C.F.S.Y.S.T.E.M.-L.I.N.E	4.6.3.5.3.6.0.0.1

Begin Date Year*	Month*	Day*	Time*	Composite End Date Month	Day	Time	State Code*	District/ User Code*	County Code
1.9.9.1	0.2	1.9	1.5.1.5				N.M	0.3.5	0.0.1

Analysis level codes and schedules

UNFILTERED

	Sample Medium**	Geologic Unit	Analysis Status**	Analysis Source**	Hydrologic Condition**	Sample Type**	Hydrologic Event**
	DI-CF-H2O		H or 9	9		BLANK	TEST
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	TOC, TOX	
METHOD:	A711B, E900				SW9020/SW8010	SW9060, SW9020	
PARAMETER:							
METHOD:							

Chain-of-Custody Record

PROJECT NAME KIRTLAND AFB IRP PROJECT NO. 463536001 P.O. NO.

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Miko Roybal	FEDERAL EXPRESS	2/19/91	1615
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
	[illegible] RMAL	02-20-91	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 PH = 5.78
SPC = 1.0

Record 6

Total number of sample bottles for this request: 10

SHIP TO:

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