3R - 303

REPORTS

DATE:

Oct. 30, 1995

Public Service Company
of New Mexico
Alvarado Square MS. 0408
Albuquerque, NM 87158

October 30, 1995

Mr. William Olson
Hydrogeologist
New Mexico Oil Conservation Division
2040 South Pacheco St.
Santa Fe, New Mexico 87505

RE: THIRD QUARTER 1995 ANALYTICAL RESULTS, ABRAMS GAS/COM L1

Dear Mr. Olson:

Public Service Company of New Mexico (PNM) hereby submits the third quarter 1995 report for the groundwater sampling program at the Abrams Gas/Com L1 well site. Sample collection was conducted on October 5, 1995, pursuant to the OCD letter dated August 24, 1995, to Denver Bearden, PNM Gas Services, regarding the groundwater investigation at the Abrams site. During the third quarter, PNM also conducted a second round of sampling for WQCC metals at the site (8/22/95). All samples were collected by GCL, our consultant, who followed EPA protocol and complied with chain-of-custody procedures.

A land survey was conducted at the site, and depth to groundwater measurements were taken at all monitor wells. A groundwater level contour map for the August and October sampling events are provided as figure 1 and 2, respectively. From the survey and water level data, PNM verified that groundwater flows in a northwesterly direction beneath the site.

Quarterly Groundwater Sampling for BTEX

Quarterly groundwater sampling was conducted at the five on-site monitoring wells, MW-1, MW-2, MW-3, MW-4, and MW-5. The samples were analyzed for BTEX using EPA Method 602. Table 1 provides the analytical results. Attachment 1 includes a hardcopy of the laboratory report. The following discussion summarizes the results:

- Toluene and xylenes were detected in MW-1 at concentrations less than WQCC standards.
- Xylenes were detected in MW-2, MW-3 and MW-5 at concentrations below the WQCC standard.

Metals Sampling

All wells were sampled for WQCC metals in August of 1995 as a follow-up to the initial round of metals sampling conducted in June during the groundwater investigation. Samples were split between Analytica Laboratories in Farmington, New Mexico (who conducted the first round of sampling) and Core Laboratories in Aurora, Colorado. A duplicate sample of MW-3 and a certified spike sample was sent to each laboratory. Table 2 presents the analytical results. A hardcopy of the laboratory reports and spike certification are provided as attachment 2.

Results from Core Laboratories indicated no exceedances of WQCC metals in any of the wells. Core performed well on the spike analysis, staying within performance acceptance limits.
Table 3 provides comparisons between Analytica Laboratories' June sampling results (see Gas Company of New Mexico Groundwater Investigation Report Abrams Gas/Com L1, July 31, 1995) and their August results. The table demonstrates numerous inconsistencies in Analytica's data. In addition, Analytica was outside the performance acceptance limits for Ba, Cd and Cr analyses of the spike sample sent to them for analysis in August (see table 2).

Based upon the performance of the laboratories, PNM believes that metals' concentrations result from naturally-occurring metals present in soils at the site location. PNM recommends that no further action be taken at the site regarding metals' monitoring.

PNM will conduct first quarter 1996 sampling in January for BTEX analysis. We will inform you at least one week prior to the scheduled event. Please call me at (505) 241-2974 if you have any questions.

Sincerely,

Maureen Gannon

Maureen Gannon
Contract Project Manager

attachments

OLSON02.LTR

cc: Denver Bearden, PNMGS
Denny Foust, OCD-Aztec
Colin Adams, PNM
Toni Ristau, PNM

Figure 1. Abrams Gas/Com L1 - Groundwater Contour Map (August '95)

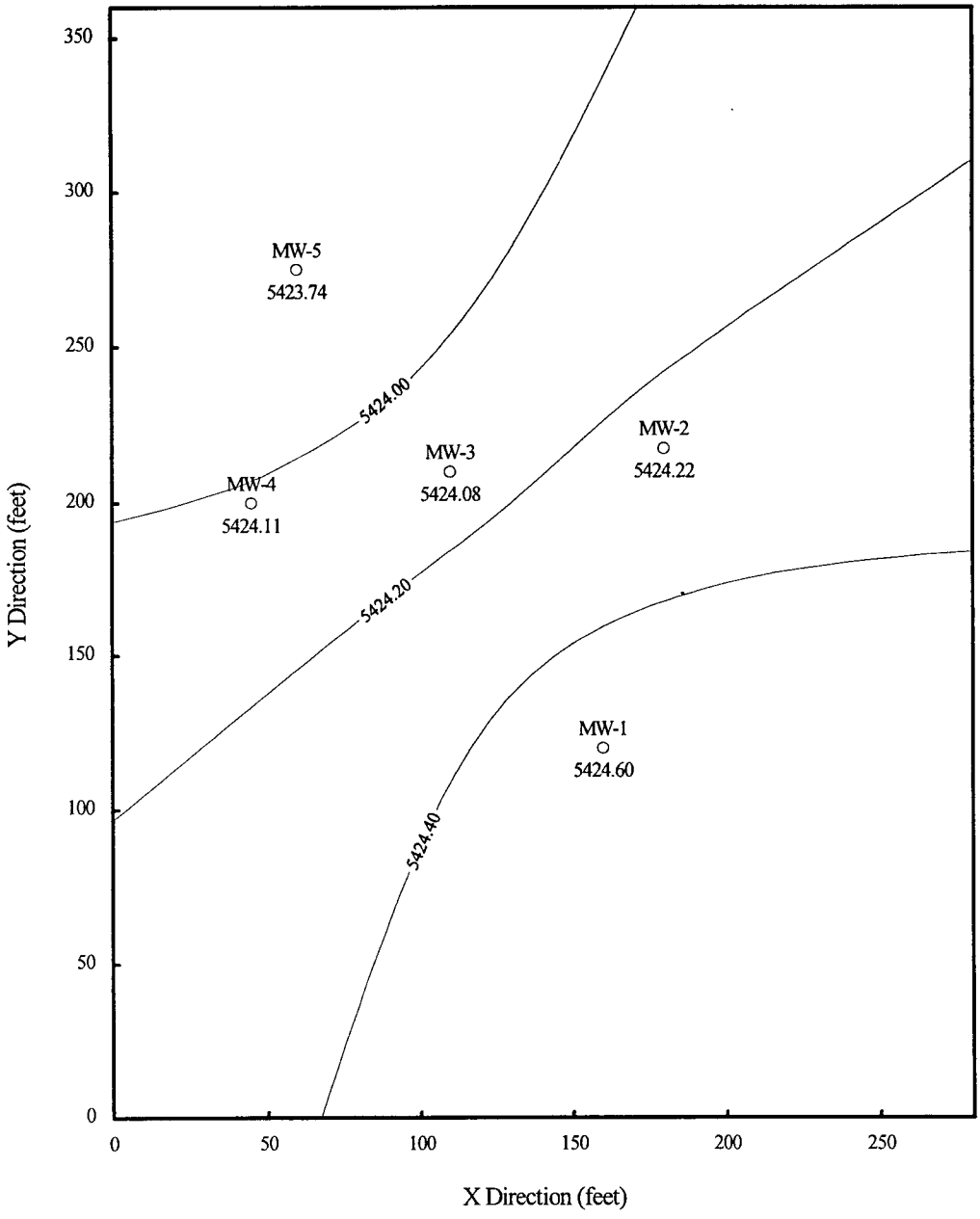

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Figure 2. Abrams Gas/Com L1 - Groundwater Contour Map (October '95)

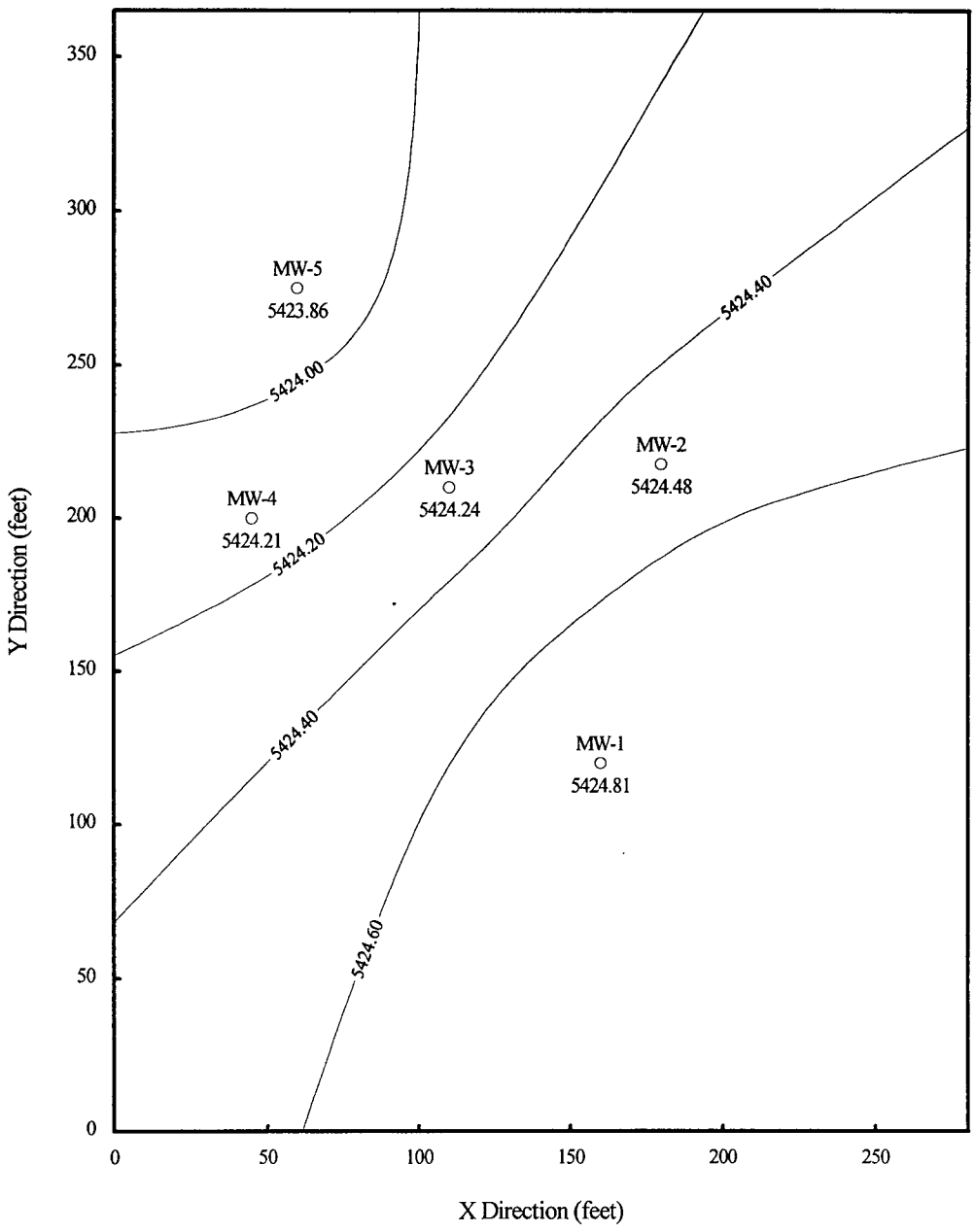

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TABLE 1
ABRAMS L1 GROUNDWATER SAMPLING RESULTS, ug/l
OCTOBER 1995

	WQCC	MW-1	MW-2	MW-3	MW-6 (Duplicate MW-3)	MW-4	MW-5	Trip Blank
B	10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
T	750	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
E	750	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
X	620	0.6	0.3	0.5	0.3	<0.2	0.2	<0.2

Bold Indicates Concentrations Above WQCC Standards

TABLE 2

ABRAMS L1 METALS SAMPLING RESULTS AUGUST 1995, mg/l

CORE LABORATORIES

	WQCC Stds.	MW-1	MW-2	MW-3	Duplicate MW-3	Dissolved MW-3	MW-4	MW-5	*Quality Control Standards*		
									Spike MW-7	*Certified Values*	*Performance Acceptance Limits*
As	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	*0.07*	*0.064*	*0.0482 - 0.0759*
Ba	1	0.15	0.04	0.04	0.12	0.03	0.2	0.15	*0.18*	*0.179*	*0.146 - 0.211*
Cd	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	*0.082*	*0.079*	*0.0644 - 0.0927*
Cr	0.05	0.02	<0.01	<0.01	<0.01	<0.01	0.01	0.03	*0.17*	*0.164*	*0.135 - 0.194*
Pb	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	*0.17*	*0.157*	*0.129 - 0.185*
Se	0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	*0.1*	*0.114*	*0.0857 - 0.135*
Ag	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	*0.08*	*0.096*	*0.0791 - 0.114*
Hg	0.002	<0.0002	<0.0002	0.0004	0.0002	<0.0002	<0.0002	<0.0002	*0.0026*	*0.00286*	*0.00214 - 0.00357*

ANALYTICA LABORATORIES

	WQCC Stds.	MW-1	MW-2	MW-3	Duplicate MW-3	Dissolved MW-3	MW-4	MW-5	*Quality Control Standards*		
									Spike MW-7	*Certified Values*	*Performance Acceptance Limits*
As	0.1	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	0.04	*0.065*	*0.064*	*0.0482 - 0.0759*
Ba	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	**1.57**	***0.32***	*0.179*	*0.146 - 0.211*
Cd	0.01	0.1	**0.07**	**0.07**	**0.14**	<0.002	**0.13**	**0.86**	***23***	*0.079*	*0.0644 - 0.0927*
Cr	0.05	0.015	0.009	0.012	0.009	<0.02	0.043	**0.198**	***0.016***	*0.164*	*0.135 - 0.194*
Pb	0.05	0.011	<0.01	<0.01	0.02	<0.01	0.025	**0.105**	*0.154*	*0.157*	*0.129 - 0.185*
Se	0.05	<0.1	0.006	<0.005	<0.005	<0.005	0.025	**0.057**	*0.101*	*0.114*	*0.0857 - 0.135*
Ag	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	*0.083*	*0.096*	*0.0791 - 0.114*
Hg	0.002	<0.001	**0.005**	**0.065**	<0.001	NA	<0.001	<0.001	*0.003*	*0.00286*	*0.00214 - 0.00357*

Bold Indicates Concentrations Above WQCC Standards or Outside Performance Acceptance Limits

TABLE 3
COMPARISON OF ANALYTICA'S JUNE AND AUGUST 1995 METALS RESULTS
ABRAMS GAS/COM L1

June Summary of Results

As exceeds WQCC Stds. in MW-3 & 4
Ba exceeds WQCC Stds. in MW-3 & 4
Cd- No exceedances
Cr exceeds WQCC Stds. in MW-1,2,3 &4
Pb exceeds WQCC Stds. in MW-3 & 4
Se- No exceedances
Hg- No exceedances

August Summary of Results

As- No exceedances
Ba exceeds WQCC Stds. in MW-5
Cd exceeds WQCC Stds. in MW-2, 3 & 5
Cr exceeds WQCC Stds. in MW-5
Pb exceeds WQCC Stds. in MW-5
Se exceeds WQCC Stds. in MW-5
Hg exceeds WQCC Stds. in MW-2 & 3

Attachment 1

Laboratory Report of Analytical Results
October 1995 Groundwater Sampling Event
Abrams Gas/Com L1 Well Site

ENVIRONMENTAL
RESOURCE ASSOCIATES
Arvada, Colorado 80002 303-431-8454

Certification

WasteWatR™ Quality Control Standards

Catalog No. WW-11 **Lot No. 9964**

Parameter	Certified Value		Performance Acceptance Limits™	
MINERALS WasteWatR™ (Catalog No. 506)	**mg/l**		**mg/l**	
total solids at 105°C	729		634 - 824	
total dissolved solids at 180°C	729		634 - 824	
conductivity at 25°C	977	umhos	831 - 1120	umhos
alkalinity as $CaCO_3$	131		117 - 146	
chloride	134		125 - 144	
fluoride	5.30		4.51 - 6.10	
sulfate	99.4		85.5 - 113	
potassium	91.8		78.1 - 106	
sodium	147		125 - 169	
pH	9.05	S.U.	8.85 - 9.25	S.U.
HARDNESS WasteWatR™ (Catalog No. 507)	**mg/l**		**mg/l**	
total suspended solids	65.0		55.3 - 74.8	
calcium	67.2		57.8 - 76.6	
magnesium	17.0		14.6 - 19.4	
calcium hardness as $CaCO_3$	168		144 - 191	
total hardness as $CaCO_3$	238		205 - 276	
GREASE & OIL WasteWatR™ (Catalog No. 504)				
grease & oil (gravimetric)	74.1	mg/bttl	44.5 - 92.6	mg/bttl
grease & oil (infrared)	88.9	mg/bttl	53.3 - 111	mg/bttl
TRACE METALS WasteWatR™ (Catalog No. 500)	**µg/l**		**µg/l**	
aluminum	257		211 - 342	
antimony	71.4		53.6 - 84.3	
arsenic	64.3		48.2 - 75.9	
barium	179		146 - 211	
beryllium	57.1		46.9 - 67.4	
boron	119		97.4 - 144	
cadmium	78.6		64.4 - 92.7	
chromium	164		135 - 194	
cobalt	236		193 - 278	
copper	207		170 - 244	
iron	379		310 - 447	
lead	157		129 - 185	
manganese	243		199 - 287	
mercury	2.86		2.14 - 3.57	
molybdenum	257		211 - 303	
nickel	229		187 - 270	
selenium	114		85.7 - 135	
silver	96.4		79.1 - 114	
strontium	286		234 - 337	
thallium	64.3		48.2 - 75.9	
vanadium	154		126 - 181	
zinc	264		217 - 312	

PROJECT # 0817-95-01

continued on back

Catalog No. WW-11 **Lot No. 9964**

Parameter	Certified Value	Performance Acceptance Limits™
DEMAND WasteWatR™ (Catalog No. 503)	**mg/l**	**mg/l**
BOD	109	75.2 - 132
CBOD	109	75.2 - 132
COD	182	154 - 209
TOC	72.9	62.0 - 83.9
total phosphorus as P	4.72	4.06 - 5.38
TKN as N	11.7	9.56 - 13.8
NUTRIENTS WasteWatR™ (Catalog No. 505)	**mg/l**	**mg/l**
ammonia as N	8.78	7.37 - 10.2
NO_3 + NO_2 as N	5.49	4.88 - 6.09
PO_4 as P	6.64	5.65 - 7.64
CYANIDE & PHENOL WasteWatR™ (Catalog No. 502)	**mg/l**	**mg/l**
cyanide, total	0.105	0.0769 - 0.134
phenol	0.218	0.166 - 0.270
RESIDUAL CHLORINE WasteWatR™ (Catalog No. 501)	**mg/l**	**mg/l**
total residual chlorine	1.40	1.05 - 1.75

The **Certified Values** are equal to 100% of the parameters in the indicated standard.

The **Performance Acceptance Limits (PALs™)** are listed as guidelines for acceptable analytical results given the limitations of the USEPA methodologies commonly used to determine these parameters and closely approximate the 95% confidence interval. The PALs™ are based on data generated by your peer laboratories in ERA's InterLaB™ program using the same samples you are analyzing and data from USEPA methods, WP, WS and CLP interlaboratory studies. If your result falls outside of the PALs™, ERA recommends that you investigate potential sources of error in your preparation and/or analytical procedures. For further technical assistance, call ERA at 1-800-372-0122.

RECEIVED OCT 05 1995

ANALYTICA
ENVIRONMENTAL LABORATORY

October 2, 1995

Denver Bearden
PNM Gas Services
PO Box 4750
Farmington, NM 87499

Dear Mr. Bearden:

Enclosed are the analytical results for the samples received at Analytica, Inc. on August 24, 1995. Metal analysis was done as requested on the chain of custody.

Most of the samples were run a total of four times. Samples were run as total metals, so sediments were included in digestions. Sediments in the samples contributed to metal hits and created variability between runs.

Tests were conducted in accordance with Standard Methods For The Examination Of Water And Wastewater Analysis, 18th ed. and the "EPA 600 Series For The Examination Of Water and Wastes", as amended.

If you have any questions or comments concerning any information in this report, please contact me at your convenience.

Sincerely,

Danica Carman
Quality Control

Amans Resample
Metals

GCL
Environmental Science and Engineering
A BDM International Company

☒ Albuquerque
505 Marquette NW, Ste. 1100
Albuquerque, NM 87102
(505) 842-0001
FAX: (505) 842-0595

☐ Mid Atlantic Region
4221 Forbes Blvd., Ste. 240
Lanham, MD 20706-4325
(301) 459-9677
FAX: (301) 459-3064

☐ NASA-WSTF
PO Drawer MM
Las Cruces, NM 88004
(505) 524-5353
FAX: (505) 524-5315

№ 9762

Chain of Custody

Date 8-22-95 Page 1 Of 1

Lab Name ANALYTICA
Address 807 So. Carlton
Farmington, NM 87401
Telephone (505) 326-2395
M Gannon
Samplers (SIGNATURES)
Mark Sikkema

Analysis Request

Sample Number	Matrix	Location	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX Modified 8015	TCLP - Vol., Semi-Vol. Herbicides, Pesticides	TCLP - Metals	RCRA Metals(8)	Priority Pollutant Metals (13)	CAM Metals (18) TTLC/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	TOTAL As, Ba, Cd, Cr, Pb, Se, Ag, Hg DISSOLVED As, Ba, Cd Cr, Pb, Se, Ag, Hg			Number of Containers
950822 1400	H2O	MW-1																							X			1
950822 1415	H2O	MW-2																							X			1
950822 1430	H2O	MW-3																							X	X		2 MDC
950822 1500	H2O	MW-6																							X			1
950822 1515	H2O	MW-4																							X			1
950822 1530	H2O	MW-5																							X			1
950822 1545	H2O	MW-7																							X			1

Project Information	Sample Receipt	
Project PNM - Abrams	Total No. of Containers	
Project Director Gannon	Chain of Custody Seals	
Charge Code No. N/A	Rec'd Good Condition/Cold	
Shipping ID. No.	Conforms to Record	
Via: Hand Delivered	Lab No.	

Special Instructions/Comments: Please invoice D. Beardan, PNM Gas Services & provide copy of results to M. Gannon, GCL

Relinquished By 1.	Relinquished By 2.	Relinquished By 3.
Mark Sikkema 1415 (Signature) (Time)	(Signature) (Time)	(Signature) (Time)
Mark Sikkema 8/24/95 (Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) (Date)
GCL (Company)	(Company)	(Company)
Received By 1.	**Received By 2.**	**Received By (Laboratory) 3.**
(Signature) (Time)	(Signature) (Time)	Danica Carman 2:20 (Signature) (Time)
(Printed Name) (Date)	(Printed Name) (Date)	Danica Carman 8/24 (Printed Name) (Date)
(Company)	(Company)	Analytica (Laboratory)

Distribution: White, Canary-Laboratory • Pink, GCL

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221400/MW - 1	Date Sampled:	08/22/95
Laboratory ID:	1350	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	<0.005	mg/L
Barium	<0.5	mg/L
Cadmium	0.10	mg/L
Chromium	0.015	mg/L
Lead	0.011	mg/L
Mercury	<0.001	mg/L
Selenium	<0.005	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments:

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221415/MW - 2	Date Sampled:	08/22/95
Laboratory ID:	1351	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	<0.005	mg/L
Barium	<0.5	mg/L
Cadmium	0.07	mg/L
Chromium	0.009+/-0.003*	mg/L
Lead	<0.01	mg/L
Mercury	0.005	mg/L
Selenium	0.006	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments: *Based on four runs. Sediments in sample caused variability.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221430/MW - 3	Date Sampled:	08/22/95
Laboratory ID:	1352	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	<0.005	mg/L
Barium	<0.5	mg/L
Cadmium	0.07	mg/L
Chromium	0.012	mg/L
Lead	<0.01	mg/L
Mercury	0.065	mg/L
Selenium	<0.005	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments:

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Dissolved Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221430/MW - 3	Date Sampled:	08/22/95
Laboratory ID:	1352	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	<0.005	mg/L
Barium	<0.5	mg/L
Cadmium	<0.002	mg/L
Chromium	<0.02	mg/L
Lead	<0.01	mg/L
Mercury	***	mg/L
Selenium	<0.005	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments: Method for mercury allows for total analysis only.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221500/MW - 6	Date Sampled:	08/22/95
Laboratory ID:	1353	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	<0.005	mg/L
Barium	<0.5	mg/L
Cadmium	0.14	mg/L
Chromium	0.009	mg/L
Lead	0.020	mg/L
Mercury	<0.001	mg/L
Selenium	<0.005	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments:

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221515/MW - 4	Date Sampled:	08/22/95
Laboratory ID:	1354	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	0.008	mg/L
Barium	<0.5	mg/L
Cadmium	0.13	mg/L
Chromium	0.043+/-0.005*	mg/L
Lead	0.025	mg/L
Mercury	<0.001	mg/L
Selenium	0.025	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments: *Based on four runs. Sediments in sample caused variability.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221530/MW - 5	Date Sampled:	08/22/95
Laboratory ID:	1355	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	0.040	mg/L
Barium	1.57+/-0.32*	mg/L
Cadmium	0.86	mg/L
Chromium	0.198	mg/L
Lead	0.105	mg/L
Mercury	<0.001	mg/L
Selenium	0.057+/-0.02*	mg/L
Silver	<0.01	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments: *Based on four runs. Sediments in sample caused variability.

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

Total Metals Analysis

PNM Gas Services

Project ID:	PNM - Abrams	Date Reported:	10/02/95
Sample ID:	9508221545/MW - 7	Date Sampled:	08/22/95
Laboratory ID:	1356	Date Received:	08/24/95
Sample Matrix:	Water		

Parameter	Analytical Result	Units
Trace Metals		
Arsenic	0.065	mg/L
Barium	0.320	mg/L
Cadmium	23.0	mg/L
Chromium	0.160	mg/L
Lead	0.154	mg/L
Mercury	0.003	mg/L
Selenium	0.101	mg/L
Silver	0.083	mg/L

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments:

Review

Quality Control Report

PNM Gas Services

Date Reported: 10/02/95

Target Analyte	QC Sample ID	Concentration (mg/L)	Certified Concentration (mg/L)	Acceptance Limits
Arsenic	SpexQC19	0.004	0.005	0.0045 - 0.0055
Barium	SpexQC7	1.860	2.00	1.80 - 2.20
Cadmium	SpexQC19	0.002	0.002	0.0018 - 0.0022
Chromium	ERA9958	0.429	0.386	0.317 - 0.455
Lead	SPEXQC19	0.010	0.010	0.009 - 0.011
Mercury	ERA9965	0.006	0.007	0.004 - 0.008
Selenium	SpexQC19	0.021	0.020	0.018 - 0.022
Silver	SpexQC7	0.005	0.005	0.0045 - 0.0055

Reference: U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983. Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Review

CORELAB

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CORE LABORATORIES

CORE LABORATORIES

ANALYTICAL REPORT

Job Number: 954183
Prepared For:

Geoscience Consultants, Ltd.
Mark Sikelianos
505 Marquette NW
Suite 1100

Albuquerque, NM 87102

Date: 09/15/95

Linda L. Benkers
Signature

Name: Linda L. Benkers

Title: QA/QC Coordinator

9-15-95
Date

CORE LABORATORIES, INC.
Analytical Chemistry Division
10703 East Bethany Drive
Aurora, CO 80014

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GCL
Environmental Science and Engineering
A BDM International Company

☒ Albuquerque
505 Marquette NW, Ste. 1100
Albuquerque, NM 87102
(505) 842-0001
FAX: (505) 842-0595

☐ Mid Atlantic Region
4221 Forbes Blvd., Ste. 240
Lanham, MD 20706-4325
(301) 459-9677
FAX: (301) 459-3064

☐ NASA-WSTF
PO Drawer MM
Las Cruces, NM 88004
(505) 524-5353
FAX: (505) 524-5315

№ 9402

Chain of Custody

Date 8/22/95 Page 1 Of 1

Lab Name CORE LABORATORIES
Address 10703 East Bethany Drive
Aurora, CO 80014-2696
Telephone 303/751-1780

Samplers (SIGNATURES)

Analysis Request

Sample Number	Matrix	Location	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX Modified 8015	TCLP- Vol., Semi-Vol. Herbicides, Pesticides	TCLP- Metals	RCRA Metals(8)	Priority Pollutant Metals (13)	CAM Metals (18) TTLC/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)	TOTAL- As, Ba, Cd, Cr, Pb, Se, Ag, Hg	Dissolved As, Ba, Cd, Cr, Pb, Se, Ag, Hg			Number of Containers
9508221400	Aqueous	MW-1																							X				2
9508221415		MW-2																							X				1
9508221430		MW-3																							X	X			2
9508221500		MW-6																							X				1
9508221515		MW-4																							X				1
9508221530		MW-5																							X				1
9508221545	↓	MW-7																							X				1

Project Information	
Project	PAM Abrams L1
Project Director	Maureen
Charge Code No.	3078.001
Shipping ID. No.	3232867396
Via:	Federal Express
Special Instructions/Comments:	

Sample Receipt	
Total No. of Containers	8
Chain of Custody Seals	OK
Rec'd Good Condition/Cold	OK
Conforms to Record	OK
Lab No.	954183

Relinquished By 1.	Relinquished By 2.	Relinquished By 3.
(Signature) (Time) 10:00	(Signature) (Time)	(Signature) (Time)
(Printed Name) Mark S. Mckenna (Date) 8/24/95	(Printed Name) (Date)	(Printed Name) (Date)
(Company) GCL	(Company)	(Company)
Received By 1.	**Received By 2.**	**Received By (Laboratory) 3.**
(Signature) (Time)	(Signature) (Time)	(Signature) (Time) 0815
(Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) FRARY (Date) 8/25/95
(Company)	(Company)	(Laboratory) CORE

Distribution: White, Canary-Laboratory • Pink, GCL

CORELAB

CORE LABORATORIES

JOB SAMPLE INFORMATION
Report Date: 09/15/95

Job Number.....: 954183
Customer .....: Geoscience Consultants, Ltd.
Job Receive Date....: 08/25/95

Project Number.....: 95000229
Customer Project ID....: ABRAMS L1 COC #9402
Project Description....: Unnamed GCL

Laboratory Sample ID.	Customer Sample ID.	Sample Matrix	Sample Date	Sample Time	Received Date	Received Time
954183-1	9508221400	Water	08/22/95	14:00	08/25/95	08:45
954183-2	9508221415	Water	08/22/95	14:15	08/25/95	08:45
954183-3	9508221430	Water	08/22/95	14:30	08/25/95	08:45
954183-4	9508221500	Water	08/22/95	15:00	08/25/95	08:45
954183-5	9508221515	Water	08/22/95	15:15	08/25/95	08:45
954183-6	9508221530	Water	08/22/95	15:30	08/25/95	08:45
954183-7	9508221545	Water	08/22/95	15:45	08/25/95	08:45

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CORE LABORATORIES

LABORATORY TESTS RESULTS

Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221400
Sample Date.....: 08/22/95
Sample Time.....: 14:00
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-1
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Total	<0.0002	0.0002	mg/L	SW-846 7470	09/08/95 0925	lmt
Arsenic (As)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2202	gef
Barium (Ba)	Total	0.15	0.01	mg/L	SW-846 6010	09/06/95 2202	gef
Cadmium (Cd)	Total	<0.005	0.005	mg/L	SW-846 6010	09/06/95 2202	gef
Chromium (Cr)	Total	0.02	0.01	mg/L	SW-846 6010	09/06/95 2202	gef
Lead (Pb)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2202	gef
Selenium (Se)	Total	<0.1	0.1	mg/L	SW-846 6010	09/06/95 2202	gef
Silver (Ag)	Total	0.01	0.01	mg/L	SW-846 6010	09/06/95 2202	gef

CORELAB

CORE LABORATORIES

LABORATORY TESTS RESULTS

Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221415
Sample Date.....: 08/22/95
Sample Time.....: 14:15
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-2
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Total	<0.0002	0.0002	mg/L	SW-846 7470	09/08/95 0927	lmt
Arsenic (As)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2208	gef
Barium (Ba)	Total	0.04	0.01	mg/L	SW-846 6010	09/06/95 2208	gef
Cadmium (Cd)	Total	<0.005	0.005	mg/L	SW-846 6010	09/06/95 2208	gef
Chromium (Cr)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2208	gef
Lead (Pb)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2208	gef
Selenium (Se)	Total	<0.1	0.1	mg/L	SW-846 6010	09/06/95 2208	gef
Silver (Ag)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2208	gef

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CORE LABORATORIES

LABORATORY TESTS RESULTS

Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221430
Sample Date.....: 08/22/95
Sample Time.....: 14:30
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-3
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Dissolved	<0.0002	0.0002	mg/L	SW-846 7470	09/14/95 0923	lmt
Mercury (Hg)	Total	0.0004	0.0002	mg/L	SW-846 7470	09/14/95 1211	lmt
Arsenic (As)	Dissolved	<0.05	0.05	mg/L	SW-846 6010	09/01/95 1351	lmt
Arsenic (As)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2223	gef
Barium (Ba)	Dissolved	0.03	0.01	mg/L	SW-846 6010	09/01/95 1351	lmt
Barium (Ba)	Total	0.04	0.01	mg/L	SW-846 6010	09/06/95 2223	gef
Cadmium (Cd)	Dissolved	<0.005	0.005	mg/L	SW-846 6010	09/01/95 1351	lmt
Cadmium (Cd)	Total	<0.005	0.005	mg/L	SW-846 6010	09/06/95 2223	gef
Chromium (Cr)	Dissolved	<0.01	0.01	mg/L	SW-846 6010	09/01/95 1351	lmt
Chromium (Cr)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2223	gef
Lead (Pb)	Dissolved	<0.05	0.05	mg/L	SW-846 6010	09/01/95 1351	lmt
Lead (Pb)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2223	gef
Selenium (Se)	Dissolved	<0.1	0.1	mg/L	SW-846 6010	09/01/95 1351	lmt
Selenium (Se)	Total	<0.1	0.1	mg/L	SW-846 6010	09/06/95 2223	gef
Silver (Ag)	Dissolved	<0.01	0.01	mg/L	SW-846 6010	09/01/95 1351	lmt

CORE LABORATORIES

LABORATORY TESTS RESULTS
Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221430
Sample Date.....: 08/22/95
Sample Time.....: 14:30
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-3
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Silver (Ag)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2223	gef

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CORE LABORATORIES

LABORATORY TESTS RESULTS

Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221500
Sample Date.....: 08/22/95
Sample Time.....: 15:00
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-4
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Total	0.0002	0.0002	mg/L	SW-846 7470	09/08/95 0938	lmt
Arsenic (As)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2217	gef
Barium (Ba)	Total	0.12	0.01	mg/L	SW-846 6010	09/06/95 2217	gef
Cadmium (Cd)	Total	<0.005	0.005	mg/L	SW-846 6010	09/06/95 2217	gef
Chromium (Cr)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2217	gef
Lead (Pb)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2217	gef
Selenium (Se)	Total	<0.1	0.1	mg/L	SW-846 6010	09/06/95 2217	gef
Silver (Ag)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2217	gef

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CORE LABORATORIES

LABORATORY TESTS RESULTS

Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221515
Sample Date.....: 08/22/95
Sample Time.....: 15:15
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-5
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Total	<0.0002	0.0002	mg/L	SW-846 7470	09/08/95 0941	lmt
Arsenic (As)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2214	gef
Barium (Ba)	Total	0.20	0.01	mg/L	SW-846 6010	09/06/95 2214	gef
Cadmium (Cd)	Total	<0.005	0.005	mg/L	SW-846 6010	09/06/95 2214	gef
Chromium (Cr)	Total	0.01	0.01	mg/L	SW-846 6010	09/06/95 2214	gef
Lead (Pb)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2214	gef
Selenium (Se)	Total	<0.1	0.1	mg/L	SW-846 6010	09/06/95 2214	gef
Silver (Ag)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2214	gef

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CORE LABORATORIES

LABORATORY TESTS RESULTS

Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221530
Sample Date.....: 08/22/95
Sample Time.....: 15:30
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-6
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Total	<0.0002	0.0002	mg/L	SW-846 7470	09/08/95 0944	lmt
Arsenic (As)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2228	gef
Barium (Ba)	Total	0.15	0.01	mg/L	SW-846 6010	09/06/95 2228	gef
Cadmium (Cd)	Total	<0.005	0.005	mg/L	SW-846 6010	09/06/95 2228	gef
Chromium (Cr)	Total	0.03	0.01	mg/L	SW-846 6010	09/06/95 2228	gef
Lead (Pb)	Total	<0.05	0.05	mg/L	SW-846 6010	09/06/95 2228	gef
Selenium (Se)	Total	<0.1	0.1	mg/L	SW-846 6010	09/06/95 2228	gef
Silver (Ag)	Total	<0.01	0.01	mg/L	SW-846 6010	09/06/95 2228	gef

CORE LABORATORIES

LABORATORY TESTS RESULTS
Report Date: 09/15/95

JOB NUMBER: 954183 CUSTOMER: Geoscience Consultants, Ltd. ATTN: Mark Sikelianos

Customer Sample ID.: 9508221545
Sample Date.....: 08/22/95
Sample Time.....: 15:45
Sample Matrix.....: Water

Laboratory Sample ID.: 954183-7
Date Received.....: 08/25/95
Time Received.....: 08:45

TEST DESCRIPTION	TEST MATRIX	FINAL RESULT	DETECTION LIMIT	UNITS OF MEASURE	TEST METHOD	DATE ANALYZED	TECHNICIAN
Acid Digestion, Total Metals	Total	completed	0	Not Applicable	SW-846 3010	09/01/95 1100	lmt
Mercury (Hg)	Total	0.0026	0.0002	mg/L	SW-846 7470	09/08/95 0946	lmt
Arsenic (As)	Total	0.07	0.05	mg/L	SW-846 6010	09/06/95 2250	gef
Barium (Ba)	Total	0.18	0.01	mg/L	SW-846 6010	09/06/95 2250	gef
Cadmium (Cd)	Total	0.082	0.005	mg/L	SW-846 6010	09/06/95 2250	gef
Chromium (Cr)	Total	0.17	0.01	mg/L	SW-846 6010	09/06/95 2250	gef
Lead (Pb)	Total	0.17	0.05	mg/L	SW-846 6010	09/06/95 2250	gef
Selenium (Se)	Total	0.1	0.1	mg/L	SW-846 6010	09/06/95 2250	gef
Silver (Ag)	Total	0.08	0.01	mg/L	SW-846 6010	09/06/95 2250	gef

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICV	Initial Calibration Verification	950801B				09/01/95	1122

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.18029	2.00			109.0
Cadmium (Cd)	0.005	2.13414	2.00			106.7
Chromium (Cr)	0.01	2.07173	2.00			103.6
Lead (Pb)	0.05	2.11179	2.00			105.6
Selenium (Se)	0.1	2.15120	2.00			107.6

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICV	Initial Calibration Verification	950325A				09/01/95	1127

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.03016	2.00			101.5
Barium (Ba)	0.01	2.05572	2.00			102.8

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICB	Initial Calibration Blank					09/01/95	1153

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00176			
Arsenic (As)	0.05	-0.00069			
Barium (Ba)	0.01	0.00018			
Cadmium (Cd)	0.005	0.00048			
Chromium (Cr)	0.01	-0.00048			
Lead (Pb)	0.05	0.00016			
Selenium (Se)	0.1	-0.00323			

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ISB	Interference Check Sample B	950816E				09/01/95	1200

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	0.99299	1.000			99.3
Arsenic (As)	0.05	0.97777	1.000			97.8
Barium (Ba)	0.01	0.51492	0.5000			103.0
Cadmium (Cd)	0.005	0.95089	1.000			95.1
Chromium (Cr)	0.01	0.46356	0.5000			92.7
Lead (Pb)	0.05	0.97850	1.000			97.8
Selenium (Se)	0.1	0.94460	1.000			94.5

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950426T				09/01/95	1245

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.57964	2.5			103.2
Barium (Ba)	0.01	4.82074	5.0			96.4
Cadmium (Cd)	0.005	1.06351	1.0			106.4
Chromium (Cr)	0.01	2.52653	2.5			101.1
Lead (Pb)	0.05	1.08881	1.0			108.9
Selenium (Se)	0.1	2.55926	2.5			102.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950608D				09/01/95	1249

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.55105	2.500			102.0

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1255

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00129			
Arsenic (As)	0.05	0.00034			
Barium (Ba)	0.01	0.00054			
Cadmium (Cd)	0.005	0.00002			
Chromium (Cr)	0.01	0.00012			
Lead (Pb)	0.05	0.00059			
Selenium (Se)	0.1	-0.00351			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950426T				09/01/95	1309

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.58971	2.5			103.6
Barium (Ba)	0.01	4.79957	5.0			96.0
Cadmium (Cd)	0.005	1.05420	1.0			105.4
Chromium (Cr)	0.01	2.50808	2.5			100.3
Lead (Pb)	0.05	1.07398	1.0			107.4
Selenium (Se)	0.1	2.53164	2.5			101.3

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950608D				09/01/95	1311

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.55140	2.500			102.1

CORELAB

CORE LABORATORIES

QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1317

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00199			
Arsenic (As)	0.05	0.00169			
Barium (Ba)	0.01	0.00027			
Cadmium (Cd)	0.005	0.00005			
Chromium (Cr)	0.01	0.00024			
Lead (Pb)	0.05	-0.00015			
Selenium (Se)	0.1	-0.00159			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954205-1	Dissolved		09/01/95	1357

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Silver (Ag)	0.01	-0.00242		-0.00390			0.00148
Arsenic (As)	0.05	-0.00179		-0.00048			0.00131
Barium (Ba)	0.01	0.02998		0.02898			0.00100
Cadmium (Cd)	0.005	-0.00036		-0.00047			0.00011
Chromium (Cr)	0.01	-0.00122		-0.00269			0.00147
Lead (Pb)	0.05	0.00051		-0.00033			0.00084
Selenium (Se)	0.1	0.00183		-0.00086			0.00269

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
PDS	Post Digestion Spike	950821D	954205-1	Dissolved		09/01/95	1402

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	0.92282	1.000	-0.00390		92.7
Arsenic (As)	0.05	0.99389	1.000	-0.00048		99.4
Barium (Ba)	0.01	1.02194	1.000	0.02898		99.3
Cadmium (Cd)	0.005	0.99385	1.000	-0.00047		99.4
Chromium (Cr)	0.01	0.97679	1.000	-0.00269		97.9
Lead (Pb)	0.05	1.00492	1.000	-0.00033		100.5

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
PDS	Post Digestion Spike	950821D	954205-1	Dissolved		09/01/95	1402

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Selenium (Se)	0.1	1.00486	1.000	-0.00086		100.6

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950426T				09/01/95	1510

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.61004	2.5			104.4
Barium (Ba)	0.01	5.18271	5.0			103.7
Cadmium (Cd)	0.005	0.98376	1.0			98.4
Chromium (Cr)	0.01	2.49947	2.5			100.0
Lead (Pb)	0.05	0.97250	1.0			97.2
Selenium (Se)	0.1	2.59566	2.5			103.8

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950608D				09/01/95	1540

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.61201	2.500			104.5

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1545

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00426			
Arsenic (As)	0.05	-0.00116			
Barium (Ba)	0.01	-0.00058			
Cadmium (Cd)	0.005	-0.00049			
Chromium (Cr)	0.01	0.00000			
Lead (Pb)	0.05	-0.00171			

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1545

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Selenium (Se)	0.1	0.00358			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950727J				09/01/95	1646

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.69009	2.5			107.6
Barium (Ba)	0.01	4.97812	5.0			99.6
Cadmium (Cd)	0.005	0.94620	1.0			94.6
Chromium (Cr)	0.01	2.43131	2.5			97.3
Lead (Pb)	0.05	0.95215	1.0			95.2
Selenium (Se)	0.1	2.50723	2.5			100.3

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	9506080				09/01/95	1650

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.58278	2.500			103.3

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1701

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00511			
Arsenic (As)	0.05	0.01332			
Barium (Ba)	0.01	0.00038			
Cadmium (Cd)	0.005	-0.00040			
Chromium (Cr)	0.01	0.00125			
Lead (Pb)	0.05	-0.00634			

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1701

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Selenium (Se)	0.1	0.01427			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954175-1	Dissolved		09/01/95	1727

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Arsenic (As)	0.05	0.00477		0.01427			0.00950
Barium (Ba)	0.01	0.11109		0.11317		2	
Cadmium (Cd)	0.005	-0.00064		-0.00056			0.00008
Chromium (Cr)	0.01	0.01436		0.00680			0.00756
Lead (Pb)	0.05	0.00864		0.00724			0.00140
Selenium (Se)	0.1	0.00476		0.01814			0.01338

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950426T				09/01/95	1746

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.67120	2.5			106.8
Barium (Ba)	0.01	5.04429	5.0			100.9
Cadmium (Cd)	0.005	0.96233	1.0			96.2
Chromium (Cr)	0.01	2.39097	2.5			95.6
Lead (Pb)	0.05	0.92710	1.0			92.7
Selenium (Se)	0.1	2.60253	2.5			104.1

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950608D				09/01/95	1752

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.26301	2.500			90.5

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1804

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00502			
Arsenic (As)	0.05	0.00703			
Barium (Ba)	0.01	0.00128			
Cadmium (Cd)	0.005	-0.00013			
Chromium (Cr)	0.01	0.00492			
Lead (Pb)	0.05	-0.00390			
Selenium (Se)	0.1	0.00969			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
PDS	Post Digestion Spike	950821D	954175-8	Dissolved		09/01/95	1815

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	0.98093	1.000	0.01311		96.8
Barium (Ba)	0.01	0.97236	1.000	0.07590		89.6
Cadmium (Cd)	0.005	0.79721	1.000	-0.00064		79.8
Chromium (Cr)	0.01	0.79565	1.000	0.01267		78.3
Lead (Pb)	0.05	0.77440	1.000	-0.00026		77.5
Selenium (Se)	0.1	1.02418	1.000	0.06343		96.1

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ISB	Interference Check Sample B	950816E				09/01/95	1834

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	0.87036	1.000			87.0
Arsenic (As)	0.05	1.06103	1.000			106.1
Barium (Ba)	0.01	0.47571	0.5000			95.1
Cadmium (Cd)	0.005	0.92596	1.000			92.6
Chromium (Cr)	0.01	0.45281	0.5000			90.6
Lead (Pb)	0.05	0.85968	1.000			86.0
Selenium (Se)	0.1	1.04246	1.000			104.2

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1738

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950426T				09/01/95	1842

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.71753	2.5			108.7
Barium (Ba)	0.01	5.10810	5.0			102.2
Cadmium (Cd)	0.005	0.97910	1.0			97.9
Chromium (Cr)	0.01	2.39329	2.5			95.7
Lead (Pb)	0.05	0.91203	1.0			91.2
Selenium (Se)	0.1	2.69191	2.5			107.7

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950608D				09/01/95	1846

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.31032	2.500			92.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/01/95	1856

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00090			
Arsenic (As)	0.05	0.00240			
Barium (Ba)	0.01	-0.00000			
Cadmium (Cd)	0.005	-0.00005			
Chromium (Cr)	0.01	0.00243			
Lead (Pb)	0.05	0.01546			
Selenium (Se)	0.1	0.01482			

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Acid Digestion, Total Metals
Method Code.....: 3010
Batch Code.....: 1768

Status.....: RPT
QC Code.....:
Units.....: mL

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MB	Method Blank					09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Acid Digestion, Total Metals	0	completed			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950825A				09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed				

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950426E				09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed				

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950426E			10	09/01/95	1100

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed				

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		951855-1			09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Acid Digestion, Total Metals	0	completed		completed			

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Acid Digestion, Total Metals
Method Code.....: 3010
Batch Code.....: 1768

Status.....: RPT
QC Code.....:
Units.....: mL

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950821D	951855-3			09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed		completed		

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954188-1			09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Acid Digestion, Total Metals	0	completed		completed			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950821D	954192-1			09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed		completed		

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954183-1	Total		09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Acid Digestion, Total Metals	0	completed		completed			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950821D	954183-2	Total		09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed		completed		

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Acid Digestion, Total Metals
Method Code.....: 3010
Batch Code.....: 1768

Status.....: RPT
QC Code.....:
Units.....: mL

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MB	Method Blank					09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Acid Digestion, Total Metals	0	completed			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950825A				09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed				

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950426E				09/01/95	1100

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed				

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950426E			10	09/01/95	1100

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Acid Digestion, Total Metals	0	completed				

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICV	Initial Calibration Verification	950607B				09/06/95	1710

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.08072	2.00			104.0
Cadmium (Cd)	0.005	2.00076	2.00			100.0
Chromium (Cr)	0.01	1.98381	2.00			99.2
Lead (Pb)	0.05	2.00119	2.00			100.1
Selenium (Se)	0.1	2.03762	2.00			101.9

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICV	Initial Calibration Verification	9503020				09/06/95	1712

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	0.99566	1.00			99.6
Barium (Ba)	0.01	1.01660	1.00			101.7

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICB	Initial Calibration Blank	950727K				09/06/95	1725

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00143			
Arsenic (As)	0.05	-0.00318			
Barium (Ba)	0.01	0.00083			
Cadmium (Cd)	0.005	0.00020			
Chromium (Cr)	0.01	0.00089			
Lead (Pb)	0.05	0.00038			
Selenium (Se)	0.1	-0.00089			

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ISB	Interference Check Sample B	950816E				09/06/95	1742

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	1.04860	1.000			104.9
Arsenic (As)	0.05	1.03279	1.000			103.3
Barium (Ba)	0.01	0.55079	0.5000			110.2
Cadmium (Cd)	0.005	0.96330	1.000			96.3
Chromium (Cr)	0.01	0.48189	0.5000			96.4
Lead (Pb)	0.05	0.96627	1.000			96.6
Selenium (Se)	0.1	1.01556	1.000			101.6

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MB	Method Blank	0824				09/06/95	1750

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00166			
Arsenic (As)	0.05	-0.00283			
Barium (Ba)	0.01	-0.00030			
Cadmium (Cd)	0.005	-0.00021			
Chromium (Cr)	0.01	-0.00059			
Lead (Pb)	0.05	0.00087			
Selenium (Se)	0.1	0.00303			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950706K				09/06/95	1754

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	0.99465	1.00			99.5
Arsenic (As)	0.05	1.04673	1.00			104.7
Barium (Ba)	0.01	1.01628	1.00			101.6
Cadmium (Cd)	0.005	1.00772	1.00			100.8
Chromium (Cr)	0.01	1.01133	1.00			101.1
Lead (Pb)	0.05	1.01236	1.00			101.2

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950706K				09/06/95	1754

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Selenium (Se)	0.1	0.98176	1.00			98.2

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCD	Laboratory Control Sample Duplicate	950706K				09/06/95	1757

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC	RPD
Silver (Ag)	0.01	0.98878	1.00		0.99465	98.9	0.6
Arsenic (As)	0.05	1.02983	1.00		1.04673	103.0	1.6
Barium (Ba)	0.01	1.00930	1.00		1.01628	100.9	0.7
Cadmium (Cd)	0.005	0.98906	1.00		1.00772	98.9	1.9
Chromium (Cr)	0.01	1.00790	1.00		1.01133	100.8	0.3
Lead (Pb)	0.05	1.00260	1.00		1.01236	100.3	1.0
Selenium (Se)	0.1	0.97952	1.00		0.98176	98.0	0.2

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954146-1	Total		09/06/95	1812

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Silver (Ag)	0.01	-0.00308		-0.00517			0.00209
Arsenic (As)	0.05	0.00146		0.00404			0.00258
Barium (Ba)	0.01	0.08270		0.08208		0	
Cadmium (Cd)	0.005	0.00003		-0.00012			0.00015
Chromium (Cr)	0.01	0.00776		0.00477			0.00299
Lead (Pb)	0.05	0.00500		0.00078			0.00422
Selenium (Se)	0.1	-0.00347		-0.00058			0.00289

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CORE LABORATORIES

QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950727J				09/06/95	1824

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.62668	2.5			105.1
Barium (Ba)	0.01	4.99440	5.0			99.9
Cadmium (Cd)	0.005	1.01158	1.0			101.2
Chromium (Cr)	0.01	2.47866	2.5			99.1
Lead (Pb)	0.05	1.01830	1.0			101.8
Selenium (Se)	0.1	2.62221	2.5			104.9

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950605D				09/06/95	1828

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.55849	2.500			102.3

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank	950727K				09/06/95	1834

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00078			
Arsenic (As)	0.05	0.00293			
Barium (Ba)	0.01	0.00020			
Cadmium (Cd)	0.005	-0.00005			
Chromium (Cr)	0.01	-0.00179			
Lead (Pb)	0.05	-0.00016			
Selenium (Se)	0.1	0.00043			

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950821D	954146-2	Total		09/06/95	1848

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	1.04290	1.000	0.00191		104.1
Arsenic (As)	0.05	1.06342	1.000	0.00866		105.5
Barium (Ba)	0.01	1.15809	1.000	0.07360		108.4
Cadmium (Cd)	0.005	0.99995	1.000	0.00308		99.7
Chromium (Cr)	0.01	1.02695	1.000	0.00822		101.9
Lead (Pb)	0.05	1.00577	1.000	0.00042		100.5
Selenium (Se)	0.1	1.01418	1.000	0.00296		101.1

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950727J				09/06/95	2026

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.68838	2.5			107.5
Barium (Ba)	0.01	5.21979	5.0			104.4
Cadmium (Cd)	0.005	0.98262	1.0			98.3
Chromium (Cr)	0.01	2.44296	2.5			97.7
Lead (Pb)	0.05	0.97782	1.0			97.8
Selenium (Se)	0.1	2.67517	2.5			107.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950605D				09/06/95	2032

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.73873	2.500			109.5

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank	950727K				09/06/95	2044

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	-0.00017			
Arsenic (As)	0.05	0.00067			
Barium (Ba)	0.01	-0.00051			
Cadmium (Cd)	0.005	-0.00024			
Chromium (Cr)	0.01	0.00104			
Lead (Pb)	0.05	-0.00057			
Selenium (Se)	0.1	-0.00074			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950706K				09/06/95	2108

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	1.06622	1.00			106.6
Arsenic (As)	0.05	1.14713	1.00			114.7
Barium (Ba)	0.01	1.09339	1.00			109.3
Cadmium (Cd)	0.005	1.07709	1.00			107.7
Chromium (Cr)	0.01	1.06705	1.00			106.7
Lead (Pb)	0.05	1.07476	1.00			107.5
Selenium (Se)	0.1	1.16017	1.00			116.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCD	Laboratory Control Sample Duplicate	950706K				09/06/95	2110

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC	RPD
Silver (Ag)	0.01	1.06628	1.00		1.06622	106.6	0.0
Arsenic (As)	0.05	1.14710	1.00		1.14713	114.7	0.0
Barium (Ba)	0.01	1.09038	1.00		1.09339	109.0	0.3
Cadmium (Cd)	0.005	1.08020	1.00		1.07709	108.0	0.3
Chromium (Cr)	0.01	1.06526	1.00		1.06705	106.5	0.2
Lead (Pb)	0.05	1.07368	1.00		1.07476	107.4	0.1

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCD	Laboratory Control Sample Duplicate	950706K				09/06/95	2110

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC	RPD
Selenium (Se)	0.1	1.15097	1.00		1.16017	115.1	0.8

MB	Method Blank	0901				09/06/95	2121

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00431			
Arsenic (As)	0.05	-0.00380			
Barium (Ba)	0.01	0.00093			
Cadmium (Cd)	0.005	0.00039			
Chromium (Cr)	0.01	0.00029			
Lead (Pb)	0.05	0.00034			
Selenium (Se)	0.1	0.00051			

LCS	Laboratory Control Sample	950825A				09/06/95	2130

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	1.05727	1.00			105.7
Arsenic (As)	0.05	1.13909	1.00			113.9
Barium (Ba)	0.01	1.08354	1.00			108.4
Cadmium (Cd)	0.005	1.07284	1.00			107.3
Chromium (Cr)	0.01	1.05754	1.00			105.8
Lead (Pb)	0.05	1.06034	1.00			106.0
Selenium (Se)	0.1	1.12903	1.00			112.9

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950727J				09/06/95	2145

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.61505	2.5			104.6
Barium (Ba)	0.01	5.27252	5.0			105.5
Cadmium (Cd)	0.005	1.03376	1.0			103.4
Chromium (Cr)	0.01	2.55043	2.5			102.0
Lead (Pb)	0.05	1.03830	1.0			103.8
Selenium (Se)	0.1	2.62512	2.5			105.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950605D				09/06/95	2149

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.71121	2.500			108.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank	950727K				09/06/95	2156

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00137			
Arsenic (As)	0.05	0.00120			
Barium (Ba)	0.01	0.00061			
Cadmium (Cd)	0.005	0.00012			
Chromium (Cr)	0.01	-0.00029			
Lead (Pb)	0.05	0.00063			
Selenium (Se)	0.1	-0.00231			

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954183-1	Total		09/06/95	2204

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Silver (Ag)	0.01	0.00206		0.01005			0.00799
Arsenic (As)	0.05	0.00361		0.00404			0.00043
Barium (Ba)	0.01	0.13959		0.14789		6	
Cadmium (Cd)	0.005	0.00027		-0.00017			0.00044
Chromium (Cr)	0.01	0.01389		0.01696			0.00307
Lead (Pb)	0.05	0.00705		0.01029			0.00324
Selenium (Se)	0.1	0.00885		0.00067			0.00818

MS	Matrix Spike	950821D	954183-2	Total		09/06/95	2210

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	1.05896	1.000	-0.00095		106.0
Arsenic (As)	0.05	1.02275	1.000	-0.00574		102.8
Barium (Ba)	0.01	1.14723	1.000	0.03999		110.7
Cadmium (Cd)	0.005	0.98963	1.000	0.00003		99.0
Chromium (Cr)	0.01	1.01297	1.000	0.00491		100.8
Lead (Pb)	0.05	0.99399	1.000	0.00413		99.0
Selenium (Se)	0.1	0.96633	1.000	0.00230		96.4

CCV	Continuing Calibration Verification	950727J				09/06/95	2253

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.58966	2.5			103.6
Barium (Ba)	0.01	5.17546	5.0			103.5
Cadmium (Cd)	0.005	1.05550	1.0			105.5
Chromium (Cr)	0.01	2.57791	2.5			103.1
Lead (Pb)	0.05	1.06552	1.0			106.6
Selenium (Se)	0.1	2.61146	2.5			104.5

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QUALITY CONTROL REPORT
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Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950605D				09/06/95	2259

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.65582	2.500			106.2

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank	950727K				09/06/95	2303

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00076			
Arsenic (As)	0.05	0.00423			
Barium (Ba)	0.01	0.00009			
Cadmium (Cd)	0.005	-0.00013			
Chromium (Cr)	0.01	0.00059			
Lead (Pb)	0.05	-0.00137			
Selenium (Se)	0.1	-0.00338			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ISB	Interference Check Sample B	950816E				09/06/95	2317

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	1.06487	1.000			106.5
Arsenic (As)	0.05	1.03397	1.000			103.4
Barium (Ba)	0.01	0.57467	0.5000			114.9
Cadmium (Cd)	0.005	1.01568	1.000			101.6
Chromium (Cr)	0.01	0.50900	0.5000			101.8
Lead (Pb)	0.05	1.02434	1.000			102.4
Selenium (Se)	0.1	1.01552	1.000			101.6

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QUALITY CONTROL REPORT

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Method Description.: Metals Analysis (ICAP)
Method Code.....: 6010
Batch Code.....: 1806

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..: ICPT
Import Code.....: ICP02

Analyst ...: gef
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950727J				09/06/95	2320

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Arsenic (As)	0.05	2.63429	2.5			105.4
Barium (Ba)	0.01	5.23169	5.0			104.6
Cadmium (Cd)	0.005	1.06420	1.0			106.4
Chromium (Cr)	0.01	2.59823	2.5			103.9
Lead (Pb)	0.05	1.07307	1.0			107.3
Selenium (Se)	0.1	2.63960	2.5			105.6

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	950605D				09/06/95	2325

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Silver (Ag)	0.01	2.68482	2.500			107.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank	950727K				09/06/95	2329

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Silver (Ag)	0.01	0.00040			
Arsenic (As)	0.05	0.00161			
Barium (Ba)	0.01	-0.00000			
Cadmium (Cd)	0.005	-0.00002			
Chromium (Cr)	0.01	-0.00015			
Lead (Pb)	0.05	-0.00048			
Selenium (Se)	0.1	0.00412			

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1832

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICV	Initial Calibration Verification	1121H			10	09/08/95	0900

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00404	0.00400			101.0

QC Type	Description					Date	Time
ICB	Initial Calibration Blank					09/08/95	0903

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.0001			

QC Type	Description		Lab ID	MTX		Date	Time
MD	Method Duplicate		954179-1	Dissolved		09/08/95	0908

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00003		0.00005			0.00002

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950907B	954179-2	Dissolved	20	09/08/95	0914

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00498	0.00500	0.00000		99.6

QC Type	Description	Reag. Code			Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	0933

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00248	0.00250			99.2

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1832

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/08/95	0935

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.0001			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954188-1	Total		09/08/95	0957

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00016		0.00016			0.00000

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950907B	954192-1	Total	20	09/08/95	1003

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00480	0.00500	0.00013		93.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	1005

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00230	0.00250			92.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/08/95	1008

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00008			

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QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1832

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
LCS	Laboratory Control Sample	950614J				09/08/95	1022

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00180	0.00192			93.8

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954178-6	Solid		09/08/95	1027

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00008		0.00013			0.00005

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950907B	954178-7	Solid	20	09/08/95	1033

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00511	0.00500	0.00000		102.2

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	1038

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00250	0.00250			100.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/08/95	1041

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00008			

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QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1832

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MB	Method Blank					09/08/95	1055

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	0.00010			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
EB	Extraction Blank				10	09/08/95	1057

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	0.00010			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	9509078	954121-26	Total	20	09/08/95	1103

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00493	0.00500	0.00060		86.6

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	1108

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00240	0.00250			96.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/08/95	1111

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.0001			

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CORE LABORATORIES

QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1832

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950907B	954186-3		20	09/08/95	1125

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00496	0.00500	-0.00005		100.2

QC Type	Description		Lab ID			Date	Time
ED	Extraction Duplicate		954190-5			09/08/95	1133

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00050		0.00055			0.00005

QC Type	Description		Lab ID			Date	Time
DD	Digestion Duplicate		954190-5			09/08/95	1135

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00055		0.00055			0.00000

QC Type	Description	Reag. Code			Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	1141

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00237	0.00250			94.8

QC Type	Description					Date	Time
CCB	Continuing Calibration Blank					09/08/95	1144

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00003			

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1832

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	1146

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00248	0.00250			99.2

QC Type	Description					Date	Time
CCB	Continuing Calibration Blank					09/08/95	1149

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	0.00000			

QC Type	Description		Lab ID	MTX		Date	Time
MD	Method Duplicate		954237-1	Total		09/08/95	1155

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00817		0.00710		14	

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/08/95	1157

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00235	0.00250			94.0

QC Type	Description					Date	Time
CCB	Continuing Calibration Blank					09/08/95	1200

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00008			

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1940

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
ICV	Initial Calibration Verification	950911B			10	09/14/95	0900

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00424	0.00400			106.0

ICB	Initial Calibration Blank						09/14/95	0902

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	0.00001			

MD	Method Duplicate		954196-1	Dissolved		09/14/95	0907

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	-0.00032		-0.00026			0.00006

MS	Matrix Spike	950913B	954196-2	Dissolved	20	09/14/95	0912

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00498	0.00500	-0.00032		106.0

CCV	Continuing Calibration Verification	1013P			4000	09/14/95	0928

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00256	0.00250			102.4

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1940

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	0930

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00001			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954203-2	Dissolved		09/14/95	0942

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	-0.00001		-0.00004			0.00003

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	0956

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00253	0.00250			101.2

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	0958

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00011			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	1024

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00265	0.00250			106.0

CORELAB

CORE LABORATORIES

QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1940

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	1026

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00011			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950913B	954203-35	Dissolved	20	09/14/95	1031

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00519	0.00500	-0.00011		106.0

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	950913B	954203-36	Dissolved	20	09/14/95	1033

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC	RPD
Mercury (Hg)	0.0002	0.00544	0.00500	-0.00011	0.00519	111.0	4.7

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954203-1	Total		09/14/95	1038

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00014		0.00001			0.00012

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	1052

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00259	0.00250			103.6

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1940

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	1054

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00001			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	1120

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00241	0.00250			96.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	1122

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00004			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950913B	954203-37	Total	20	09/14/95	1127

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00510	0.00500	-0.00007		103.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	950913B	954203-38	Total	20	09/14/95	1129

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC	RPD
Mercury (Hg)	0.0002	0.00529	0.00500	-0.00007	0.00510	107.2	3.7

CORELAB

CORE LABORATORIES

QUALITY CONTROL REPORT
Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1940

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MD	Method Duplicate		954227-1	Total		09/14/95	1139

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value	RPD	ABS Diff.
Mercury (Hg)	0.0002	0.00011		0.00008			0.00003

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
MS	Matrix Spike	950913B	954229-1	Total	20	09/14/95	1143

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00519	0.00500	0.00002		103.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	1148

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00262	0.00250			104.8

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	1150

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	0.00017			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	1216

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00259	0.00250			103.6

CORE LABORATORIES

QUALITY CONTROL REPORT

Report Date: 09/15/95

Method Description.: Mercury (CVAA)
Method Code.....: 7470
Batch Code.....: 1940

Status.....: RPT
QC Code.....: MET
Units.....: mg/L

Calc Code.....:
Equipment Code..:
Import Code.....:

Analyst ...: lmt
Job Number.: 954183

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	1218

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00007			

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	1013P			4000	09/14/95	1228

Test Description	Detection Limit	QC Value	Diluted Value	Orig. Value	Alt. Value	% REC
Mercury (Hg)	0.0002	0.00241	0.00250			96.4

QC Type	Description	Reag. Code	Lab ID	MTX	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank					09/14/95	1230

Test Description	Detection Limit	QC Value	True Value	Orig. Value	Alt. Value
Mercury (Hg)	0.0002	-0.00011			

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 09/15/95

(1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983

(2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, 1989

(3) Standard Methods for The Examination of Water and Wastewater, 17th Edition, 1989

(4) EPA 600/4-80-032, Prescribed Procedures For Measurement Of Radioactivity In Drinking Water, August 1980

(5) EPA 600/8-78-017, Microbiological Methods For Monitoring The Environment, December 1978

(6) Federal Register, July 1, 1990 (40 CFR Part 136)

(7) EPA 600/4-88-03, Methods For The Determination of Organics Compounds in Drinking Water, December 1988

(8) U.S.G.S. Methods For Determination of Inorganic Substances In Water And Fluvial Sediments, Book 5, Chapter A1, 1985

(9) Federal Register, Friday, June 7, 1991 (40 CFR Parts 141 & 142)

(10) Standard Methods For The Examination of Water and Wastewater, 16th Edition, 1985

(11) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991

(12) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965

(13) EPA SW-846, Test Methods For Evaluating Solid Waste, Third Edition, Revision 1, November 1990

(14) ASTM, Section 5, Petroleum Products, Lubricants, and Fossil Fuels, Volume 05.05, Gaseous Fuels, Coal, and Coke

QUALITY ASSURANCE METHODS
REFERENCES AND NOTES
Report Date: 09/15/95

(15) EPA 600/2-78-054, Field and Laboratory Methods Applicable To Overburdens and Mine Soils, March 1978

(16) ASTM, Part 19, Soils and Rocks; Building Stones, 1981

Comments: Data in the QA report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "Date Analyzed" is the actual date of analysis. Results for soil and sludge samples are reported on a wet weight basis (i.e. not corrected for percent moisture) unless otherwise indicated.

NC = Not Calculable Due to Value(s) lower than the Detection Limit.

BLANK QC SAMPLE IDENTIFICATION

MB	Method Blank
ICB	Initial Calibration Blank
CCB	Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS	Method (Matrix) Spike
MSD	Method (Matrix) Spike Duplicate
PDS	Post Digestion Spike
SB	Spiked Blank
SBD	Spike Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS	Laboratory Control Standard
RS	Reference Standard
ICV	Initial Calibration Verification Standard
CCV	Continuing Calibration Verification Standard
ISA/ISB	ICP Interface Check Sample
ICL	Initial Calibration/Laboratory Control Sample
DSC	Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 09/15/95

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORY	CODE
Core Laboratories - Anaheim, CA	* AN
Core Laboratories - Casper, WY	* CA
Core Laboratories - Corpus Christi, TX	* CC
Core Laboratories - Houston, TX	* HP
Core Laboratories - Lake Charles, LA	* LC
Core Laboratories - Long Beach, CA	* LB
Other Subcontract Laboratories	* XX

EXPLANATION OF DATA FLAGS

B - This flag is used to indicate that an analyte is present in the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.

D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.

E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.

I - Used to indicate matrix interference.

J - Indicates that a value is an estimate. It is used when a compound is determined to be present based on the mass spectral data, but at a concentration less than the practical quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.

X - Indicates that a surrogate recovery is outside the specified quality control limits.

QUALITY ASSURANCE METHODS
REFERENCES AND NOTES

Report Date: 09/15/95

Y - Used to identify a spike or spike duplicate recovery that is outside the specified quality control limits.
Z - Indicates a relative percent difference for a spike and spike duplicate is outside the specified quality control limits.
* - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
^ - Used to indicate that a standard is outside specified quality control limits.

Attachment 2

Laboratory Reports of Analytical Results
and Spike Certification
August 1995 Metals Sampling in Groundwater
Abrams Gas/Com L1 Well Site

RECEIVED OCT 1 9 1995

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8483*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1 9510041245***				
Project Location:	***MW-1***				
Sampled by:	MS	Date:	4-Oct-95	Time:	12:45
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	0.3	*ug/L*	0.2	*ug/L*
o-Xylene	0.3	*ug/L*	0.2	*ug/L*
TOTAL	0.9	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: JaH

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8484*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1 9510041400***				
Project Location:	***MW-2***				
Sampled by:	MS	Date:	4-Oct-95	Time:	14:00
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	<0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	0.3	*ug/L*	0.2	*ug/L*
o-Xylene	<0.2	*ug/L*	0.2	*ug/L*
TOTAL	0.3	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: JAK

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8485*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1 9510041430***				
Project Location:	***MW-3***				
Sampled by:	MS	Date:	4-Oct-95	Time:	14:30
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	<0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	0.3	*ug/L*	0.2	*ug/L*
o-Xylene	0.2	*ug/L*	0.2	*ug/L*
TOTAL	0.5	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: DaG

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8486*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1 9510041500***				
Project Location:	***MW-6***				
Sampled by:	MS	Date:	4-Oct-95	Time:	15:00
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	<0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	0.3	*ug/L*	0.2	*ug/L*
o-Xylene	<0.2	*ug/L*	0.2	*ug/L*
TOTAL	0.3	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: DaH

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8487*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1 9510041530***				
Project Location:	***MW-4***				
Sampled by:	MS	Date:	4-Oct-95	Time:	15:30
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	<0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	<0.2	*ug/L*	0.2	*ug/L*
o-Xylene	<0.2	*ug/L*	0.2	*ug/L*
TOTAL	<0.2	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: DH

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8488*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1 9510041600***				
Project Location:	***MW-5***				
Sampled by:	MS	Date:	4-Oct-95	Time:	16:00
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	<0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	<0.2	*ug/L*	0.2	*ug/L*
o-Xylene	0.2	*ug/L*	0.2	*ug/L*
TOTAL	0.2	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: JaC

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:	*Maureen Gannon*	Date:	5-Oct-95
Company:	*GCL Environmental Science and Engineering*	*COC No.:*	*3521*
Address:	*505 Marquette NW, Ste. 1100*	*Sample No.*	*8489*
City, State:	*Albuquerque, NM 87102*	*Job No.*	*2-1000*

Project Name:	***PNMGS - Abrams L1***				
Project Location:	***Trip Blank***				
Sampled by:	DC	Date:	4-Oct-95	Time:	10:35
Analyzed by:	DC	Date:	5-Oct-95		
Type of Sample:	*Liquid*				

Aromatic Volatile Organics

Component	*Result*	*Units of Measure*	*Detection Limit*	*Units of Measure*
Benzene	<0.2	*ug/L*	0.2	*ug/L*
Toluene	<0.2	*ug/L*	0.2	*ug/L*
Ethylbenzene	<0.2	*ug/L*	0.2	*ug/L*
m,p-Xylene	<0.2	*ug/L*	0.2	*ug/L*
o-Xylene	<0.2	*ug/L*	0.2	*ug/L*
TOTAL	<0.2	*ug/L*		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved by: DAK

Date: 10/5/95

OFF: (505) 325-8786

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-5667

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 5-Oct-95

Internal QC No.: 0419-STD
Surrogate QC No.: 0420-STD
Reference Standard QC No.: 0355-STD

Method Blank

Analyte	Result	Units of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Analyte	Units of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20	20	1	15%
Toluene	ppb	20	20	0	15%
Ethylbenzene	ppb	20	19	3	15%
m,p-Xylene	ppb	40	40	1	15%
o-Xylene	ppb	20	19	3	15%

Matrix Spike

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	90	81	(39-150)	7	20%
Toluene	90	79	(46-148)	9	20%
Ethylbenzene	88	75	(32-160)	11	20%
m,p-Xylene	91	79	(35-145)	10	20%
o-Xylene	88	79	(35-145)	7	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limits	(70-130)	
8483-3521	98	
8484-3521	97	
8485-3521	97	
8486-3521	98	
8487-3521	97	
8488-3521	97	
8489-3521	98	

S1: Flourobenzene

GCL
Environmental Science and Engineering
A BDM International Company

X Albuquerque
505 Marquette NW, Ste. 1100
Albuquerque, NM 87102
(505) 842-0001
FAX: (505) 842-0595

☐ Mid Atlantic Region
4221 Forbes Blvd., Ste. 240
Lanham, MD 20706-4325
(301) 459-9677
FAX: (301) 459-3064

☐ NASA-WSTF
PO Drawer MM
Las Cruces, NM 88004
(505) 524-5353
FAX: (505) 524-5315

№ 9871

Chain of Custody

Date 10-04-95 Page 1 of 1

Lab Name ONSITE TECHNOLOGIES
Address P.O. BOX 2606
FARMINGTON, NM 87499
Telephone (505) 325-5667
Samplers (SIGNATURES)

Analysis Request

Sample Number	Matrix	Location	Halogenated Volatiles 601/8010	Aromatic Volatiles 602/8020 BTEX only	Phenols, Sub Phenols 604/8040	Pesticides/PCB 608/8080	Polynuclear Aromatic Hydrocarbons 610/8310	Volatile Compounds GC/MS 624/8240	Base/Neu/Acid Compounds GC/MS 625/8270	Total Organic Carbon (TOC) 415/9060	Total Organic Halides (TOX) 9020	Petroleum Hydrocarbons 418.1	TPH/BTEX Modified 8015	TCLP- Vol., Semi-Vol. Herbicides, Pesticides	TCLP- Metals	RCRA Metals(8)	Priority Pollutant Metals (13)	CAM Metals (18) TTLC/STLC	Flash Point	Corrosivity	Reactivity	Oil & Grease	Cyanide Total/Amenable	Chemical Oxygen Demand (COD)					Number of Containers
9510041245	H2O	MW-1		X																				8483-3521					2
9510041400	H2O	MW-2		X																				8484					2
9510041430	H2O	MW-3		X																				8485					2
9510041500	H2O	MW-6		X																				8486					2
9510041530	H2O	MW-4		X																				8487					2
9510041600	H2O	MW-5		X																				8488					2
TRIP BLANK	H2O	TRIP		X																				8489					2

Project Information	
Project	ABRAMS L1
Project Director	GANNON
Charge Code No.	
Shipping ID. No.	
Via:	HAND DELIVERED

Sample Receipt	
Total No. of Containers	
Chain of Custody Seals	
Rec'd Good Condition/Cold	
Conforms to Record	
Lab No.	

Special Instructions/Comments:
INVOICE PNMGS DIRECTLY c/o DENVER
OCARDEN; SEND RESULTS TO PNMGS;
TO GCL c/o MAUREEN GANNON

Relinquished By 1.	Relinquished By 2.	Relinquished By 3.
(Signature) M Gannon (Time) 16:58	(Signature) (Time)	(Signature) (Time)
(Printed Name) Maureen D. Gannon (Date) 10/04/95	(Printed Name) (Date)	(Printed Name) (Date)
(Company) GCL	(Company)	(Company)
Received By 1.	**Received By 2.**	**Received By (Laboratory) 3.**
(Signature) (Time)	(Signature) (Time)	(Signature) (Time) 1704
(Printed Name) (Date)	(Printed Name) (Date)	(Printed Name) DAVID COX (Date) 10/4/95
(Company)	(Company)	(Laboratory) ON SITE TECH

Distribution: White, Canary-Laboratory • Pink, GCL

CHAIN OF CUSTODY RECORD

3521

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 10/4/95

Page 1 of 1

Purchase Order No.:	Job No.		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name	Title
Company	Dept.	Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.

Sampling Location:

Sampler:

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX EPA 8020	LAB ID
	10/4/95	1245			2	✓	9483-3521
		1400			2	✓	9484-3521
		1430			2	✓	9485
		1520			2	✓	9486
		1530			2	✓	9487
		1600			2	✓	9488
		1635			2	✓	9489

Relinquished by:	Date/Time	Received by:	Date/Time 10/4/95 1704
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
	✓		

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client